INCORPORATION OF THE EFFECTS OF FERTILIZER INTO AN EXISTING COMPUTER GROWTH MODEL FOR GOLDEN DOWNS FOREST, NELSON REGION, NEW ZEALAND

A thesis
submitted in partial fulfillment
of the requirements for the Degree
of
Doctor of Philosophy in Forestry
in the
University of Canterbury
by

K. E. Lowell

University of Canterbury
1984

CONTENTS

CONTENTS (cont.)

CHAPTER PAGE

CONTENTS (cont.)

ABSTRACT

Methodology to be incorporated into an existing computer model to quantify the effects of fertilizer on growth and yield in Golden Downs Forest in the Nelson region (South Island, New Zealand) was developed and evaluated. Because basal area growth was affected by fertilization, basal area response was modelled using non-linear and linear regression to derive a sigmoid curve which peaks four years after fertilization whose exact shape depends on the rate of, and time elapsed since, fertilization, and the characteristics of the fertilized stand. Volumes of unfertilized and fertilized stands were quantified with equal accuracy and precision using a single-tree taper-based stand volume system derived using sectional measurements of unfertilized and fertilized trees in Golden Downs. This growth and yield methodology was then evaluated on four areas other than Golden Downs in the Nelson region (Pigeon Valley, Motueka, Harakeke, and Rabbit Island) and found to be inapplicable to each. Therefore, adjustments for estimates of stand growth and yield from the model were suggested for each area.

LIST OF TABLES

LIST OF TABLES (cont.)

LIST OF TABLES (cont.)

LIST OF FIGURES

LIST OF APPENDICES

LIST OF APPENDICES (cont.)

SYMBOLS

SYMBOL	FIRST PAGE USED	MEANING
A	69	Allowable error
A_f	82	Age when fertilized(years)
A_p	127	Present age(years)
b_is	82	Regression coefficients
$\underline{c}$,$\underline{a}$,$\underline{p}$	62	Original model coefficients
D	116	Diameter breast height overbark for equations (cm)
dbhob	40	Diameter breat height overbark for text (cm)
Dmean	127	Mean diameter (cm)
Dmin	127	Minimum diameter (cm)
Dvar	127	Variance of diameter distribution (cm)
dob	119	Diameter overbark at l (cm)
dub	116	Diameter underbark at l (cm)
E	65	Error (residual)
e	63	Natural log base (2.71828)
F.R.I.	61	Forest Research Institute
G	61	Basal area (m^2/ha)
G_f	82	Basal area at time of fertilizer application (m^2/ha)
G_r	84	Basal area response (m^2/ha)
h	118	Tree height (m)
H	41	Top height (m)
l	230	Distance from tree tip (m)
ln	62	Natural log
$\underline{L}$	63	Eigenvalues of original model
MB	66	Mean bias
MR	69	Maximum residual

SYMBOLS (cont.)

SYMBOL	FIRST PAGE USED	MEANING
N	61	Stocking (stems/ha)
N_f	82	Rate of nitrogen fertilization (kg/ha)
P_f	82	Rate of phosphorous fertilization (kg/ha)
R^2	64	Coefficient of determination
P.S.P.	39	Permanent Sample Plot
RelD	130	Percent of trees in a distribution whose dbhobs are less than the dbhob of the tree of interest
S	41	Site index(top height at age 20)
SEB	67	Standard error of bias
SE_r	64	Standard error of regression
SE%	70	Percent standard error
t_n	12	A time of interest
t_f	82	Time of fertilization
t_p	82	Present time
X	116	Relative height on tree ($\frac{l}{h}$)
Y_f	84	Time since fertilization (years)

CHAPTER 1

INTRODUCTION/OBJECTIVES

Because the need of forest managers for estimates of growth and yield for forest stands is well recognized, yield prediction systems have long been examined in forestry. Studies in growth and yield have covered a wide range of approaches from relatively simple Markov-chain models, to highly sophisticated computer models. The goal of many systems has been the same, however: to produce a system that will allow a forest manager to explore alternate management strategies before a particular strategy is actually adopted.

One management strategy that has shown promise for increasing yield and has been given much attention recently is forest fertilization. This is particularly true for radiata pine (*Pinus radiata*, D. Don.) in Golden Downs Forest, a Forest Service exotic plantation of approximately 30 000 hectares in the Nelson region of the South Island of New Zealand. Forest fertilization should be viewed as an option for a land manager by which the volume, and subsequent yield, of a forest stand may be increased. Without a yield prediction system that incorporates the effects of fertilization, a forest manager may not be able to employ the strategies that will best meet the needs of the forest industry. Alternatively, a yield prediction system that does incorporate the effects of fertilizer is yet another tool for the land manager to use to assess alternative management strategies.

To approach the subject of the effect of forest fertilization in this study, an existing growth and yield system for Golden Downs in the form of an already-existing computer model was modified to incorporate the effects of fertilization; the effects that were found to be present were an effect of fertilizer on stand development (growth) and an effect on stem taper subsequently affecting estimates of stand volume (yield).

Of further interest, however, when considering a growth and yield system for Golden Downs that incorporates the effect of fertilizer is the applicability of such a system to other areas in Nelson. Because Nelson is an extremely variable region, forest growth in areas other than Golden Downs on different soil types is likely to be markedly different than forest growth in Golden Downs. Consequently, the applicability of any model for Golden Downs to other areas in Nelson is likely to be limited. In practice, however, a growth model for Golden Downs is also likely to be applied to other areas in Nelson whether or not growth in those areas is similar to growth in Golden Downs. Because of this, the model produced in this study that incorporates fertilizer effect (henceforth referred to as "the adjusted model") was evaluated on four areas in the Nelson region other than Golden Downs; this evaluation was done for both forest growth and forest yield.

The objectives of this study were, therefore, (1) to produce a modification of an existing growth and yield system to account for fertilizer effect, and (2) to evaluate the adjusted model for unfertilized and fertilized forest stands on other areas in Nelson.

To achieve these objectives, two types of data were necessary. First, it was necessary to have periodic measurements of the unit of interest; in this study, the forest stand was the unit of interest. In Golden Downs, data consisting of yearly remeasurements of plots that were part of various fertilizer trials established from 1969 onward provided the data necessary to incorporate the effect of fertilization on stand development into the unadjusted model. For evaluation of other areas, both unfertilized and fertilized stand data was used; these data were obtained from yearly remeasurements of plots of fertilizer trials and permanent plots on the four areas other than Golden Downs considered in this study. These data consisted of measurements of stocking, basal area, and top height for successive periods such that each "observation" of data contained two measurements of stocking, basal area, and top height: the initial measurement at time t_1 and the measurement at a subsequent time t_2. Using data in this form, the effect of fertilizer on stand development and the applicability of the adjusted model to areas other than Golden Downs could be determined.

In order to examine the question of fertilizer effect on stand yield, the second type of data necessary was volume data. This was of particular interest in this study since fertilization is thought to change tree shape, therefore making conventional two-dimensional volume functions that use basal area and height inadequate for fertilized trees and stands. In this study, sectional measurements of a sample of trees taken at four year intervals generally on the fertilizer trials of all areas considered were available. These measurements provided the data necessary to evaluate whether or not fertilizer will cause changes in tree taper and shape in the Nelson region. These data also made it possible to develop a taper-based volume system for Golden Downs equally applicable to both fertilized and unfertilized trees and stands.

After deriving the adjusted model and incorporating the taper-based volume system into it, as the final step in this project, the adjusted model for Golden Downs was used with growth and yield data collected from the four other areas in Nelson to determine the ability of the model to estimate the growth and yield of both unfertilized and fertilized stands for those areas. With the completion of this analysis, it was felt that the two stated objectives of this study had been fulfilled.

CHAPTER 2

LITERATURE REVIEW

The need to estimate forest growth and yield in order to aid land managers in making decisions about forest land has long been recognized. Because the volume of wood produced by forest land generally is what is of most interest to a land manager, early efforts tended to concentrate primarily on the yield of a stand at a certain age and growth was subsequently obtained by differencing (Burkhart,1977). One such example in New Zealand was the set of yield tables by Lewis (1954), who used alignment charts based on a large number of temporary sample plots to estimate the yield of unthinned radiata pine stands. Since that time, however, the emphasis in growth and yield studies has shifted so that growth is of primary importance and yield is estimated subsequent to growth. This shift has been caused largely by advances in computing which have made practical the use of complex, multi-variable mathematical functions to describe forest growth. This shift has also partly resulted from a desire by many to explore alternative management strategies and their effects on forest growth. The outcome of this trend is that most growth and yield studies at the present time concern statistically-based computer models that attempt to simulate forest growth.

Presently, there are a tremendous number of forest growth models throughout the world and the variety among them is considerable. It is useful to explain where the specific computer model used in this thesis fits in to the general field of computer growth modelling. Further, it is useful to not only understand the general problems associated with computer growth models, but also the specific problems associated with modelling fertilizer effect. This literature review is not meant to be an exhaustive discussion of these topics, but rather is intended to provide this background.

I. MODELLING OVERVIEW

For New Zealand, Tennent (1982b) identified three generations of computer models: the first culminated with the production of the Beekhuis (1966) model for thinned radiata pine in New Zealand in which algebraic formulae, straight-line regressions, and graphs provided estimates of stand growth; the second generation used more advanced statistical techniques but was concerned mainly with the precision of the predicting equations (usually multiple linear regressions), rather than with the biological realism of growth trends; the third generation of models now being produced is much more concerned with biological realism than with statistical significance. Burkhart (1977), and others have stressed the need for biologically rational models that have a functional form mirroring biological trends. An advantage of such an approach is that such models tend to perform better outside the range of data used to produce them than do models of the first two generations.

Despite these apparent differences, the philosophy behind all forest growth models is basically similar

(Goulding, 1979): relatively easily measured variables thought to be possibly significant in predicting crop statistics at some future date are statistically tested. For example, for forest stands it is common to model the development of basal area, stand height, and/or stocking as a function of time. There are, however, numerous ways to specifically implement this general philosophy. Consequently, it is useful to examine some of the ways in which models may be categorized in order to give an indication of the diversity in the types of computer growth models and the methodology used to derive them.

II. CATEGORIES OF GROWTH MODELS

Munro (1974) differentiated between stand level and individual tree models. Stand level models are generally used in relatively homogeneous blocks of forests such as plantations and focus on how the basal area, stocking, and height of a stand develop over time. Examples of stand level models are Beekhuis (1966), Sullivan and Clutter (1972), Garcia (1978), and Garcia (1981a). (Garcia's (1978) model is the subject of this thesis and some details of it are discussed more fully in Chapter 4.) Alternatively, individual tree models concentrate on how the diameter, height, and probability of mortality of single trees in a stand develop over time; stand development is subsequently derived from aggregating the growth of the individual trees. Examples of individual tree models include Daniels and Burkhart (1975), Ek and Monserud (1974), and Tennent

(1982a). Stand level models generally give better estimates of stand parameters since the entire stand is the unit being modelled, but tree level models have the advantage that the diameter distribution of a stand is known, which may be useful for estimating the utilizable yield of a forest. An indication of the similarity of philosophies used in both types of models is provided by Pienaar and Turnbull (1973) who used a non-linear equation to approximate an S-shaped curve which was fitted for both stands and trees for basal area, height, and volume. The functional form used was found to be flexible enough for both entire stands and single trees.

Models may also be categorized as either stochastic or deterministic (Burkhart,1977). Deterministic models always produce the same outputs for a given set of inputs whereas stochastic models have a random component built in. For example, repeated use of Garcia's (1978) deterministic stand model will always give the same estimate of stand growth at any future point provided that initial basal area, top height, stocking, site index, and age are the same for each use. However, the individual tree model called FOREST by Ek and Monserud (1974) uses a random component for tree diameter and height growth. The result is that trees, and therefore stands also, will be predicted to develop slightly differently with each repeated use of FOREST despite identical initial stand conditions. Deterministic models seek to give the most likely estimates of stand or tree development, whereas stochastic models attempt to account for the random variation seemingly inherent in biological processes.

It would seem that trying to incorporate random variation into a growth model might at times improve model estimates, and at other times cause a decrease in accuracy and precision of model estimates. The net result would appear to be the introduction of added variance to model estimates.

A further way of categorizing models is by the type of equation(s) used and the statistical procedure(s) adopted to estimate model coefficients. Multiple linear regression is one technique that has been widely used. For example, Kilpatrick (1978) used it to model trends of height, basal area, volume, and stocking with age. Similarly, Rosvall (1979) used multiple linear regression to derive a model to estimate stand volume growth as a function of altitude, site index, species, and a number of other factors. However, because many biological entities do not develop linearly over time, non-linear regression is another technique that has been used. Non-linear regression is a technique which uses an iterative fitting procedure to obtain coefficient estimates, thus allowing the fitting of relatively complex functions. Non-linear regression has been used by, for example, Bruce (1981), Ek (1974), and others as an alternative to multiple linear regression. These authors and others used non-linear equations to estimate growth primarily and yield subsequently, but Ferell and Lundgren (1976) employed non-linear regression to obtain only yield; growth was obtainable by differencing.

Whether using non-linear or linear regression to obtain model coefficients, primary consideration should be given to the functional form of an equation rather than the statistical goodness-of-fit; models so derived tend to perform better outside the range of data used to fit them than similar models derived with statistical significance as the primary concern. Consideration of functional form, rather than consideration of statistical significance only, makes it more likely that estimates of growth for many stand conditions will be realistic; consideration of statistical significance alone may provide realistic estimates only for the data used to fit a function. The advantage of this is apparent when one considers that rarely is enough data available to a modeller to encompass the entire range of conditions likely to be explored by a model user.

Figure 1 illustrates the functional forms of some mathematical equations that have been used. Multiple linear regression may only be applied to the first two; though all may be fitted using non-linear regression, only the last two generally are. These forms may be examined with the assumption that both basal area and height will develop over time as an S-shaped curve that goes through the origin and has an upper asymptote or, for basal area, possibly decreases. In other words, growth is zero at age zero, and there is some maximum which basal area and height cannot exceed. For basal area it is likely that growth will actually decrease from the maximum, which is dependent on species and local site factors, after mortality becomes substantial. The first form has an upper asymptote but does not go through the origin; the second form goes through the origin, reaches a peak, and then decreases rapidly; the third both goes through the origin and has an upper asymptote; the fourth

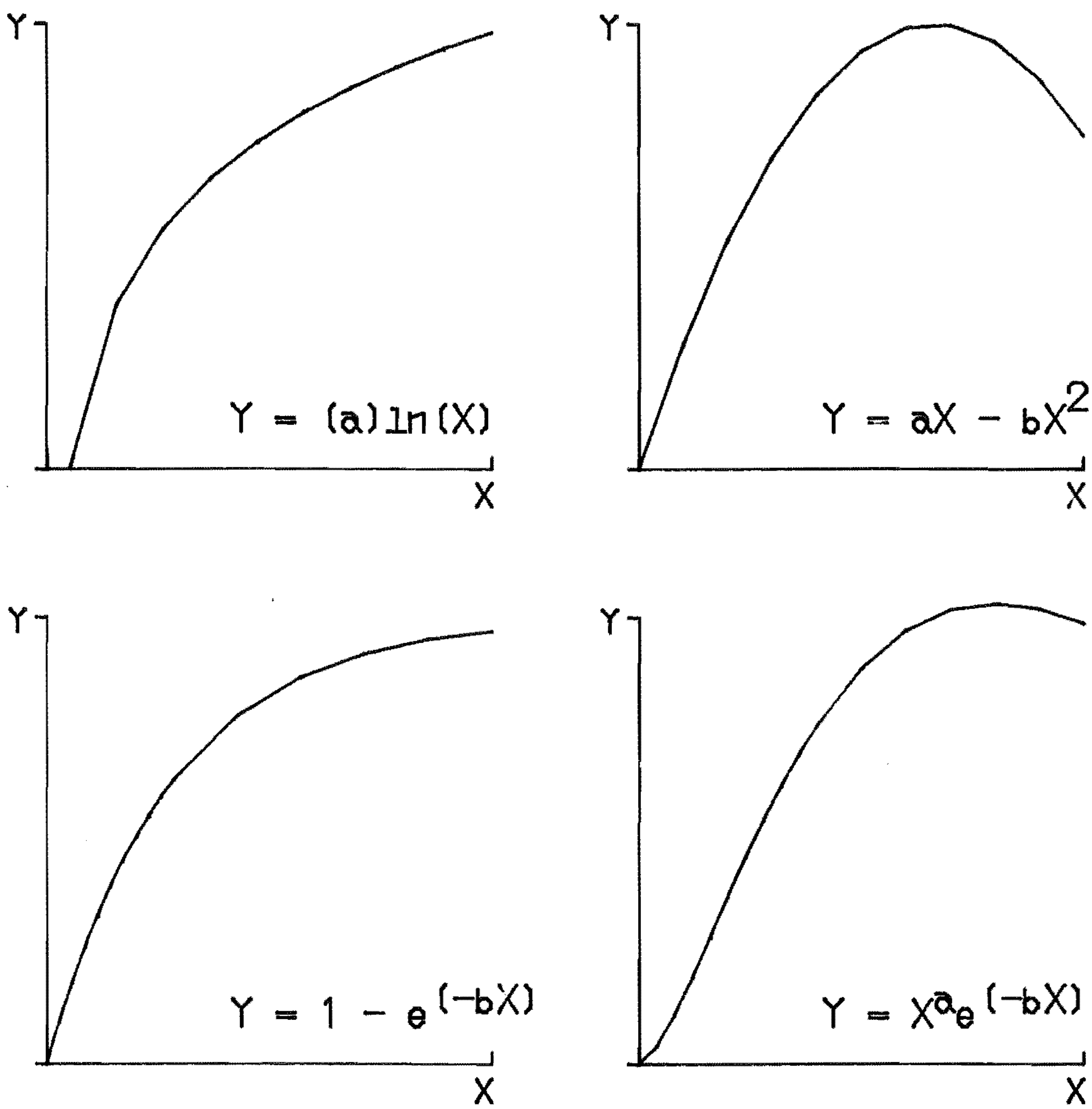


Fig. 1. Functional forms of selected equations.

goes through the origin and gives the best approximation of an S-shaped curve, but does not have an upper asymptote.

Though each of the equations presented in Figure 1 have a number of desirable properties, none would appear to be completely ideal. Because of this, other forms and systems of equations and fitting procedures have been used. Glover and Hool (1979) employed a calculated basal area index in conjunction with a Weibull function to estimate tree mortality. In their system, a diameter distribution was generated and the probability of a given tree dying was calculated based on estimated growth and the position of the tree in the diameter distribution. The probability of death was then compared to a random number to determine whether or not that tree was to be considered dead at that point. Sullivan and Clutter (1972) chose a derivative-integral equation system to estimate basal area and volume growth. The system suggested was two equations (one each for basal area and volume) with linear coefficients constrained so that the coefficients in one equation were related to the coefficients in the other. Garcia (1978) also suggested a series of differential equations to estimate basal area, top height, and stocking of a stand over time; coefficients were derived using maximum-likelihood estimators. As mentioned, this model will be discussed more fully in Chapter 4.

While the preceding discussion is by no means an exhaustive presentation of growth models, it is indicative of the many approaches considered. Before examining problems associated with modelling growth and yield, Table 1 is presented as a summary of the variety found in the models

Table 1. Summary of models discussed.

Author	Pred. Methods[1]	Est. Method[1]	Model Unit	S or D[2]	Data Used[3]
Beekhuis (1966)	MLR + G	MLR + G	Stand	D	PP + TP
Sullivan and Clutter (1972)	DE	MLE or MLR	Stand	D	PP
Pienaar and Turnbull (1973)	NLR	NLR	Stand or Tree	D	SA + PP
Ek and Monserud (1974)	NLR	NLR	Tree	S	PP
Daniels and Burkhart (1975)	NLR	NLR	Tree	S	PP
Ferell and Lundgren (1976)	NLR	NLR	Stand	D	PP
Kilpatrick (1978)	MLR	MLR	Stand	D	PP
Glover and Hool (1979)	NLR + WF	NLR	Tree	S	PP
Rossvall (1979)	MLR	MLR	Stand	D	PP
Bruce (1981)	NLR	NLR	Stand	D	PP
Garcia (1981)	DE	MLE	Stand	D	PP
Tennent (1982)	MLR	MLR + FA	Tree	D	PP

1)
MLR - Multiple linear regression
G - Graphics
DE - Differential equations
NLR - Non-linear regression
MLE - Maximum-lielihood estimators
WF - Weibull function
FA - Factor Analysis

2)
Stochastic or Deterministic

3)
PP - Permanent plots
TP - Temporary plots
SA - Stem Analysis

discussed.

III. PROBLEMS IN MODELLING GROWTH AND YIELD

Probably the biggest problem in constructing growth and yield models is caused by the data available. Because permanent plots are a relatively economical way for a land manager to monitor tree and stand growth over time, growth and yield data generally are from repeated measurements of permanent plots. However, remeasurement of the same experimental unit -- i.e. a plot or tree -- will result in correlation among observations and so violate an important assumption of regression analysis. Sullivan and Reynolds (1976) pointed out that, while this would cause variances of coefficients to be underestimated when ordinary least squares (OLS) was used, the coefficients themselves would nonetheless be unbiased. They concluded, however, that generalized least squares (GLS) or maximum-likelihood estimators may avoid this problem of underestimated variances. However, Sullivan and Clutter (1972) fitted a model using both OLS and maximum-likelihood estimators and concluded that neither method was clearly superior to the other in terms of the resulting models' precision and accuracy. Ferguson and Leech (1978) found that using OLS or GLS gave models with equal predictive ability but that OLS underestimated variances making an OLS model appear more precise than actually could be expected. West (1981) also found that GLS was necessary if significance tests on an equation fitted from time-series data were to be performed satisfactorily, but acknowledged that GLS is not developed enough for widespread use. As an alternative, he suggested that an awareness of problems using OLS and auto-correlated data would overcome many problems.

Another problem in modelling forest growth is common to most, if not all biological data. One assumption of regression analysis is that the variance of residuals is homogeneous about a regression line. However, in actuality, biological data generally have greater variance with large experimental units than with small experimental units. In the case of yield modelling, estimates become less precise as the length of the prediction period increases. For example, in this study it was apparent that the precision of model estimates of basal area decreased as the length of the prediction period increased. Thus, the variance of residuals along any regression line should be examined carefully to determine whether or not the variance is homogeneous; if not, this must be recognized and an estimate of the residual variance for large values of the independent variable(s) should be presented.

The two preceding paragraphs suggest that some problems in growth modelling may be circumvented by thorough model evaluation. Though careful evaluation will not necessarily overcome all of the problems mentioned, it is a crucial step in model production; thorough evaluation of a model may increase a user's confidence in the model's estimates despite the problems mentioned. Because of this, model evaluation is examined here in more detail.

IV. METHODS OF EVALUATING GROWTH MODELS

To adequately evaluate any model, it is apparent that more is necessary than a mere presentation of selected statistics. Buchman and Shifley (1983) suggest models be evaluated based on available computing facilities and support personnel, model performance, and model design (biologic realism and flexibility). A model intended for a certain user is of little value if it requires more expertise or computer support than is available to that user. Likewise, a model that performs poorly by giving estimates too imprecise or inaccurate for practical use is also of little value. Brand and Holdaway (1983) separated model performance into three components: time dependence, accuracy, and precision, and stressed the need for thorough model evaluation. Goulding (1979) discussed three stages of validation (a process which was not distinguished from evaluation): first, an evaluation of a model and its parameters, second, verification of the computer model, and third, validation. The first stage concerns suggesting a functional form for a model and statistically estimating its coefficients; the second concerns ensuring that the resulting model is incorporated into a computer program correctly; the third concerns testing the model on data separate from that used to estimate its coefficients. Ultimately however, much of model evaluation or validation concerns statistics that are used to report on model reliability.

Typically then, a model is evaluated through inputting present stand statistics to estimate stand statistics at some future time; this is generally done with the data used to estimate a model but should also be done with an independent data set if possible. Residuals are calculated and evaluated in terms of accuracy -- often termed bias -- and precision. Much residual evaluation has revolved around "conventional" parametric statistics such as the mean residual, the standard error of residuals, and the subsequent Student's t value. The mean residual gives an estimate of the model's tendency to under- or overestimate a given parameter, the standard error gives an estimate of the precision of estimates, and the t-value measures whether or not the mean residual is statistically different from zero. (The mean residual is referred to as the "mean bias" in subsequent sections.) While these statistics are a reasonable first step, they should not constitute complete model evaluation.

Freese (1960) pointed out that a t-value so calculated may be misleading if the residual variance is high or the sample size is small; high variances result in low t-values and small sample sizes provide too few degrees of freedom for a satisfactory evaluation. Reynolds et al. (1981) presented a number of parametric and non-parametric statistics to be used to evaluate stochastic models for which the "best estimate" of a single observation is not a point-estimate, but has a mean and a variance. For deterministic models, however, these procedures do not appear applicable, and the best evaluation of them would seem to be a combination of statistics concerned with both accuracy and precision.

Because of this and problems mentioned earlier, it is suggested here that any modification of the deterministic model considered in this study must be evaluated not only with conventional statistics that estimate the accuracy and precision of estimates, but also with statistics that take into account the length of the prediction period, as well as the variance of the residuals in relation to the size of the independent variable(s). The specific statistics to be used in subsequent analysis in this study are discussed in Chapter 4.

Since model evaluation is generally considered to be the last step in model development, the attention of this literature review will now shift from a general discussion of models to the specifics of computer growth modelling that are of concern in this study.

V. THE GROWTH MODEL TO BE MODIFIED

Garcia (1978) presented a generalized yield modelling methodology appropriate for pine plantations in New Zealand which has since been applied to data from Southland Conservancy and Golden Downs Forest, Nelson. The model is deterministic and consists of a series of differential equations whose coefficients were estimated using maximum-likelihood estimators. The methodology has been termed the "state space approach" for reasons briefly outlined in the following paragraph.

The behavior of any system depends on the "state" of that system at any time. The "state" is represented in Garcia's model in terms of net basal area per hectare, the number of stems per hectare, and the top height at a given age. (Stocking is later used in this thesis synonomously for stems per hectare; the top height measure used is the mean height of the 100 largest stems per hectare as measured by diameter breast height overbark.) Once the state of the system has been defined, a transition function is used to describe the trajectory along which these three stand measures will proceed to some future time. The exact trajectory, or path, along which the stand parameters move is also related to the site index and the age. Specifics concerning computations used in the model are presented in Chapter 4. Figures 2 to 4 are examples of surfaces estimated by the model for top height, basal area, and stocking.

The model was formulated with three constraints: consistency, composition, and causality. Consistency is achieved if given the same inputs at time t_1, the model will always produce the same estimates at a future time t_n. Composition ensures that projecting a stand from t_1 to t_2 and then from t_2 to t_3 will yield the same outputs as a one-step projection from t_1 to t_3. Causality ensures that if a state is defined at t_1 and "advanced" to t_1, the state projected is the same as the state input.

To modify such a model to incorporate fertilizer effect, there would seem to be two options. First, the existing model might be altered by producing a function that would modify existing model coefficients based on fertilizer rate, time of application, stand conditions, and anything else thought to be relevant. Or second, it might be possible to develop a function external to the model able to

Fig. 2. Height against site index and age.

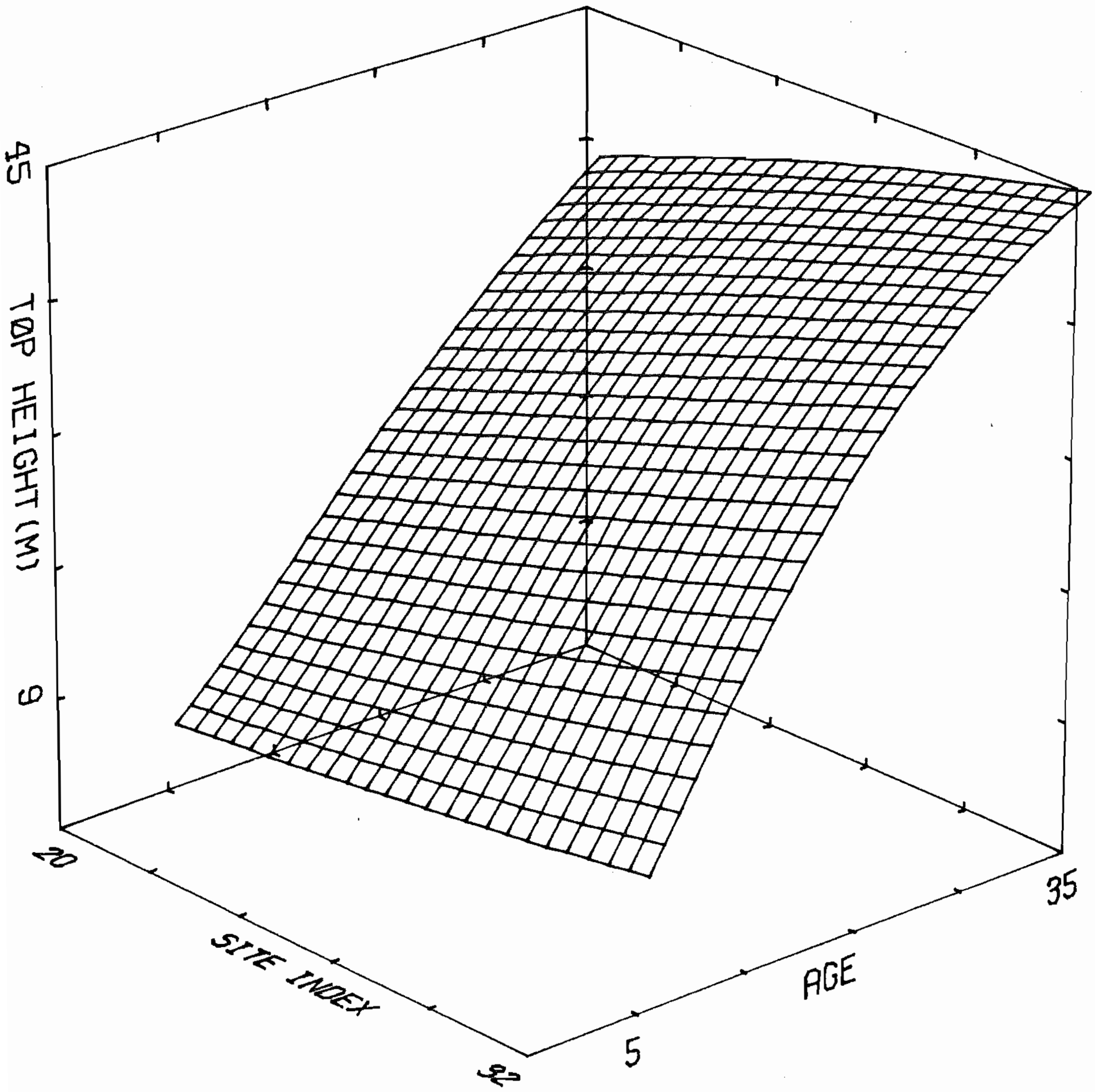


Fig. 3. Basal area against site index and age.

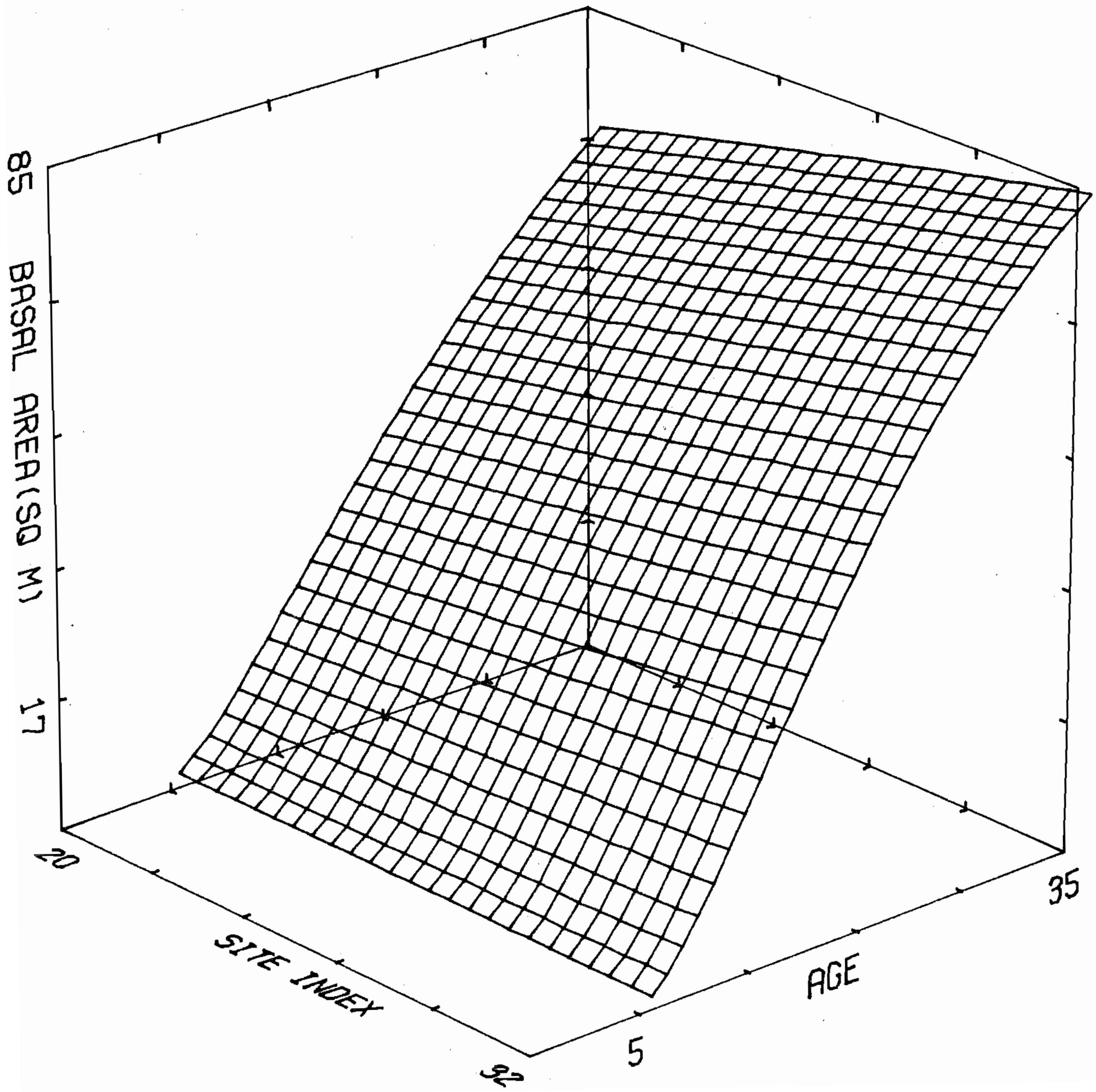
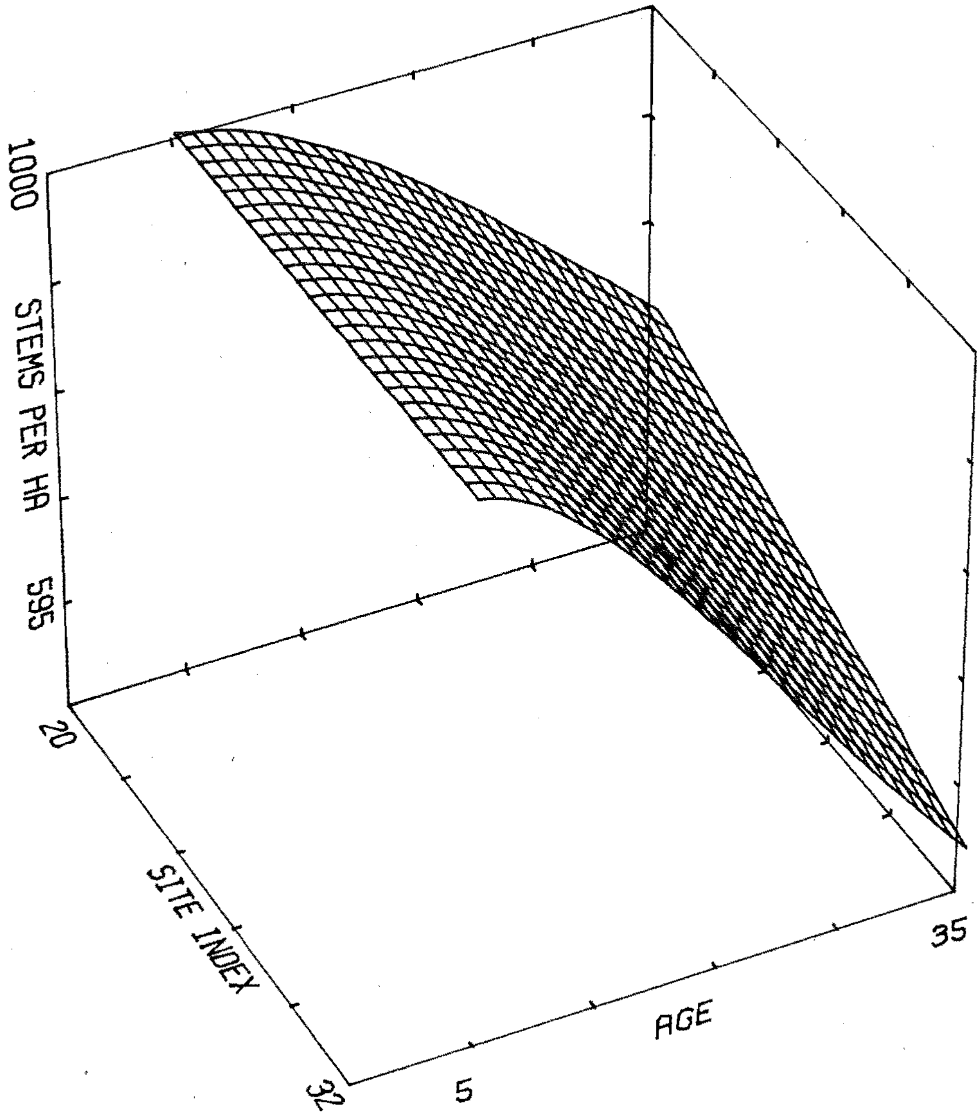


Fig. 4. Stocking against site index and age.



quantify fertilizer effect thereby leaving the coefficients of the original model unaltered. In either case, it is first necessary to examine what the effects of forest fertilization are likely to be.

VI. MODELLING FERTILIZER EFFECT

It is apparent that incorporating fertilizer effect into any growth and yield model will require an examination of growth functions; such functions are discussed in the first part of this section. It is possible, however, that yield might also be affected by fertilization. Therefore, functions that estimate volumes of fertilized stands must also be examined; such functions are discussed in the second part of this section.

(1) Growth

Modelling stand growth to include fertilization as a possible option requires that the effects of fertilization can be mathematically expressed. There is little in the forestry literature on modelling fertilizer effects until roughly 10 or 15 years ago when widespread interest in forest fertilization began to emerge. Among the earliest attempts to model fertilizer effect were those of Daniels and Burkhart (1975), Ek and Monserud (1974), and Hegyi (1974). Partly owing to a lack of data, all three groups of researchers quantified fertilizer effect as an increase in site index to reflect the better growing conditions brought about by fertilization. However, since site index is defined as mean height at a given index age, a change in site index will cause a change in height. This may be acceptable if fertilizer affects height growth. Turner (1982), for example, found that over the life of a rotation of radiata pine in New South Wales, a height response to phosphorous was detected. However, height was not as sensitive an indicator of fertilizer response as basal area. Cellier and Stephens (1980) tested 12 nutrients at establishment on radiata pine in Southern Australia and found that only nitrogen gave a height response. Others have shown, however, that some fertilizers in some locations will not affect height growth (Jacks *et al.*, 1972). Consequently, a change in site index may be a perfectly acceptable way of modelling the effects of certain fertilizers, whereas it may be an inappropriate way to model the effects of others.

Another approach was Bruce (1981), who modelled fertilizer effect in all-aged Douglas-fir (*Psuedotsuga menziesii*,(Mirb.) Franco) in the Pacific Northwest as a basal area response to nitrogen application where response was dependent on site index and the number of years since fertilization. Re-fertilization was also examined and it was found that re-fertilization (after the response to the first fertilization had ceased) affected stand basal area in the same way as the first fertilization.

Hunter (pers. comm.) has modelled fertilizer effect in older radiata pine stands throughout Nelson, New Zealand using not only stand variables, but also the amounts of nitrogen, phosphorous, and the percentage of clay in the topsoil to predict basal area response. He has concluded that response decreases with increasing age of fertilization and that there is virtually no basal area response on unthinned stands older than age 20.

Gilchrist (A., pers. comm.) confirmed that nitrogen has no effect on height growth on pole-sized and larger radiata pine on pumice soils, which is indicative of a weakness in the approach of modelling fertilizer effect as a change in site index for these conditions. He also concluded that basal area response increases, culminates, and then decreases with increasing site index, amount of nitrogen applied, and age of fertilization between ages 5 and 11.3 years. This implies that there is an optimum age for nitrogen fertilization between 5 and 11.3 years and that after this range of ages, response to fertilizer may be expected to decrease; this is therefore in agreement with Hunter.

Rosvall (1979) modelled fertilizer effect for all ages of pine and spruce in Sweden as a constant annual increase in basal area; the increase was set to zero after a defined duration. He also found less response on better sites. While this might at first seem surprising, it is reasonable to postulate that fertilizer will have its greatest effects on the most deficient sites.

Most attempts to model fertilizer effect have concentrated on the effect of fertilization on either height or basal area. However, it is possible that tree mortality may also be affected. Pegg (1966) found significantly fewer stems on the fertilized plots than on the unfertilized plots of a fertilizer trial 14 years after heavy fertilization in 18 to 29-year-old loblolly pine (<u>Pinus taeda</u>,L.) in the

North Carolina Piedmont. Waring (1980) concluded that for radiata pine in Australia, of 12 elements tested, only nitrogen had an effect on mortality and only early in the life of a stand when mortality tends to be high; nitrogen did not affect mortality later in the rotation when mortality is generally lower. Unfortunately, studies such as these are rare because at the present relatively early stage of fertilizer research, data for long-term effects of fertilization are not readily available.

In summary, it is apparent from the studies mentioned in this section that before modification of the model may begin, available data must be examined. In doing so, the effect of fertilizer must be assessed as to whether or not there has been a height response, a basal area response, and whether or not there are enough data to examine if fertilization has affected mortality. Once this has been done, then modification of the growth functions of the model may begin.

(2) Volume[1)]

In addition to the development of basal area, height, and stocking of stands in this study possibly being affected by fertilization, as mentioned, there is another consequence of fertilization that is more difficult to quantify. Daniels and Burkhart (1975) pointed out that volume of fertilized stands may be underestimated due to a change in form of

1) Though yield was mentioned earlier in this chapter and volume was not, it is preferable to examine volume since yield is estimated subsequent to volume. Consequently, ensuing discussions generally use the term "volume" instead of the term "yield".

fertilized trees and use of a volume system insensitive to form changes. This is because fertilization may cause a volume increase at points on a stem other than those typically measured, such as breast height diameter.

Pegg (1966) used Girard Form Class for loblolly pine and concluded that nitrogen fertilization caused a change in form class but the magnitude of the change depended on the level of phosphorous present in the soil. Miller and Cooper (1973) found that form factor in pole crop Corsican pine (*Pinus nigra* var. *maritima* (Ait.) Melv.) on sand dunes in Scotland did not change with fertilization but tree volumes did slightly, implying that measurements taken only in the lower portions of the stem may not adequately quantify fertilizer volume response. Woollons and Will (1975) also felt that diameter response to fertilization in 13-year-old radiata pine on pumice soils may be largely in the upper portion of a stem. Mitchell and Kellog (1972) found that fertilized codominant and intermediate 49-year-old Douglas-fir in British Columbia had the same shape as unfertilized codominant and intermediate trees, but that diameter increment in the central third of the stem was affected on dominant fertilized trees. Snowdon (1981) found that in radiata and slash pine in Australia, fertilizer caused a significant difference in the height-diameter relationship between unfertilized and fertilized trees implying a change in taper as a result of fertilization. Cameron *et al*. (1980) found that in the Northern Territory of Australia for Caribean pine (*Pinus caribea* var. *hondurensis*), nitrogen caused a change in tree form.

These and other studies were concerned with describing the change in shape which (they concluded) definitely occurred. These studies did not, however, propose alternatives to the problem of misleading estimates of volumes of fertilized trees using conventional volume estimation systems. There are a limited number of studies, however, that have attempted to resolve this problem.

Snowdon *et al*. (1981) showed that the difference in shape between unfertilized and fertilized pole-sized radiata pine in New Zealand and New South Wales and pole-sized slash pine (*Pinus elliottii* Engelm.) in New South Wales was significant in the middle half of the stem and suggested that unfertilized or fertilized tree shape may be characterized by form and average taper. Whyte and Mead (1976) compared 5 methods of estimating volume responses in 40-year-old radiata pine in Nelson and concluded that basal area measurements would miss much of the volume response; they recommended stem analysis on a carefully chosen sample of trees to best quantify fertilizer volume response in a forest stand.

Meng (1981) appears to be the only one who has so far attempted to redefine conventional volume systems to accomodate fertilizer response. He used a volume equation based on diameter breast height and tree height in addition to a series of dummy variables representing each of four fertilizer treatments for 80 year-old black spruce (*Picea mariana* (Mill.) B.S.P.) in Quebec. This method becomes unruly with more than a few treatments, however, because each additional treatment requires an additional dummy variable. Furthermore, such a method allows for only discrete treatments and not a continuum.

As a result of these studies on quantifying volume of fertilized stands and trees, it is suggested here that any attempt to quantify volume of fertilized trees or stands must first examine and adequately quantify any change in tree shape caused by fertilization; it is unlikely that conventional diameter-height systems will, suffice though this premise must be explored. One technique that should be examined is taper equations; taper equations seek to describe stem profiles primarily and volumes are secondarily obtained by integration of the equation for a given tree. While probably more complex than simply deriving a volume equation dependent on basal area and height and a function involving fertilization, taper equations would seem to have the potential to describe any change in shape caused by fertilization. Furthermore, taper equations may be integrated for volume to any height thus providing estimates not only of net stand volume, but also of any specified product assortment.

CHAPTER 3

DATA

Based on the published work reviewed in the previous section, it is apparent that in order to examine the effect of forest fertilization, two categories of data are necessary: (1) repeated measurements of stand stocking, basal area, and top height from permanent sample plots (P.S.P.s) and (2) sectional measurements of individual trees taken at the same time as at least one of the repeated stand measurements. From these two general categories of data, five types of specific information were used in this study. A detailed description and discussion of the form of each is presented in the following five paragraphs.

The first type of data consisted of repeated measurements of stand stocking, basal area, and top height of permanent plots. These data were used to adjust the growth functions of the existing (unadjusted) model to incorporate fertilizer effect. For repeated stand measurements, an observation for repeated stand measurements actually consisted of data from two successive plot measurements: the stand stocking, basal area, and top height for a plot at an initial age t_1, and the same four quantities for the same plot measured at some subsequent age t_2; information about the age and rate of fertilization was also included on each observation. The next observation then had stand stocking, basal area, and top height for that plot for age t_1 coupled with the measurements of the same plot for age t_3. This continued to the last measurement age or until a trial was re-fertilized, in which case the age of re-fertilization became the new age t_1.

The second general type of data comprised sectional measurements. These data were used to develop the taper equations devised for this study. An observation consisted of the outside and inside bark diameters of a stem at a certain height above the ground, and the diameter breast height overbark (dbhob) and total height of the sample tree.

The third type of data was a summary of dbhob, height, and volume of each sectionally measured tree. These data were used both to evaluate taper equations for single-tree volume and to derive single-tree height equations necessary for the development of the volume estimating system. To obtain an estimate of tree volume, the volume of each tree section was estimated assuming each section to be conical, and all sections of a tree were summed; this was done for both overbark and underbark measurements. Hence, a single-tree observation consisted of the dbhob, total tree height, and estimates of underbark and overbark volume for a given tree.

The fourth general type of data was stand volume. These data were used to evaluate various equations derived in the course of producing a stand volume estimating system. To obtain an estimate of stand volume, a volume-basal area straight-line regression was calculated for each plot using the volume estimates of sectionally measured trees on a particular plot. A given plot's regression was then used in conjunction with that plot's stand basal area and stocking to produce an estimate of stand volume; this was done for both underbark and overbark volume on each plot. The resulting estimates of stand volume are henceforth referred to as the "true" stand volumes though they are actually the "best estimates" of stand volume. Each stand volume observation, therefore, consisted of the underbark and overbark estimates of stand volume, as well as stand stocking, basal area, top height, and age of measurement.

The final type of data was diameter distribution information. These data were used to derive functions to estimate the minimum and mean dbhob, together with the variance of the dbhob distribution for a given plot. For each measurement P.S.P.s, the minimum dbhob was noted, and both the arithmetic average of all measured dbhob's and their variance were calculated. An observation, therefore, consisted of the minimum and mean dbhob, and the variance of the dbhob distribution of a plot along with that stand's stocking, basal area, top height, age, amount and type of fertilizer applied, and age at which fertilizer was applied.

Before discussing the specifics of data used in this study, it is necessary to discuss four aspects of the data. Firstly, it was mentioned briefly in Chapter 2 that the Golden Downs model uses site index for growth predictions. Up to this point in this thesis, no methodology for the calculation of site index calculation has been discussed. Site index throughout this study was calculated using the height-age curve of the model to project top height to age 20. As such, it is calculated as:

$$S = (a_3\,(1-(1-\frac{H^{c_{33}}}{a_3})^{(\frac{20-t0}{t_1-t0})})^{(\frac{1}{c_{33}})}) \qquad (1)$$

Site index was calculated for all stands having repeated measurements as follows: (1)for unfertilized stands, site index was estimated for each measurement period on a given plot and the arithmetic mean of the estimates was used as the estimate of site index for that plot; (2)for fertilized stands, because it could not be assumed that fertilizer had not caused a height response, the site index of a plot was estimated using only the initial measurement of that plot before fertilization

Secondly, each item of data was carefully screened to ensure that all data were as reliable as possible. For stand measurements of fertilizer trials, data were discarded if: (1)stand height decreased from one measurement to the next; (2)stand height was lacking for a given measurement; (3)the amount of fertilizer applied to a plot in a fertilizer trial was uncertain; (4)fertilizer for a trial was applied before trees had grown to breast-height; (5)there was catastrophic mortality such as extensive windthrow over the life of the trial. For sectional measurements, data were discarded if diameter increased anywhere from the butt to the tip of a tree. Further, bark thicknesses of certain trees appeared to be far too large. Notably, all which were suspect were measured in 1969 and were recorded in the same person's hand-writing. Consultation with F.R.I. staff involved in sectional measurements confirmed that bark thicknesses were extreme (Graham, pers. comm., Fitzgerald, pers. comm.), but failed to rectify or explain the cause; as a result, these measurements taken in 1969 were discarded.

Thirdly, when any fertilizer trial was re-fertilized four years or more after establishment, the two fertilizations were treated as two completely separate trials. Although this assumption is possibly questionable, there were simply not enough data to examine the effect of re-fertilization as a part of the original fertilizer regime. Furthermore, the re-fertilizations were originally done with the assumption that the response of a stand to the initial fertilization would have been completed by the time of the second fertilization. Moreover, the work of Bruce (1981) cited in the previous section suggests that re-fertilization will affect stand basal area in much the same way as an initial fertilization.

The fourth and final aspect of the data to discuss concerns the classification of data as unfertilized or fertilized. Because of the treatments represented in the Golden Downs fertilizer trials, it was necessary to formulate a fertilizer adjustment that would allow a nitrogen, or nitrogen and phosphorous response, but not a phosphorous response alone. Furthermore, on some Golden Downs experiments all plots including controls received a basal dressing of boron. Because of this lack of completely unfertilized control plots on some trials, it was necessary to assume boron application alone caused no response. As a result of this, all data from any stand which did not receive nitrogen were classed as unfertilized; for consistency, this applied to all areas and not just Golden Downs. The implication of this is that a stand receiving, for example, 50 kg/ha phosphorous and 8 kg/ha boron was classed as unfertilized. Though this may seem questionable, the treatments represented in the Golden Downs data left little choice but to make this assumption. A further implication of this is that estimates from the model are likely to be highly misleading for areas in Nelson other than Golden Downs. For example, phosphorous alone may not cause a response on the soils of Golden Downs, but phosphorous alone may induce a response on other soil types. Despite this, in order to maintain consistency throughout this study, any plot on any trial which did not receive nitrogen was classed as unfertilized; likewise for sectionally measured trees.

The specific data used in this study are described here in the order in which results of analyses are later presented.

I. DATA USED TO ESTIMATE COEFFICIENTS OF THE UNADJUSTED MODEL

Estimation of coefficients for any growth model is possible using permanent sample plot (P.S.P.) remeasurement data. The New Zealand Forest Service has maintained a system of such plots in its exotic plantations throughout this country for many years; Golden Downs forest is no exception to this. When the unadjusted model was proposed and formulated, P.S.P. data from Golden Downs for radiata pine were screened for suitability for use in estimating model coefficients; details of this screening are given in Garcia (unpblshd.). The data used to estimate coefficients consisted of 469 measurements from 119 different P.S.P.s yielding 339 measurement pairs or observations. These data covered a large range of ages, stockings, and sites and were utilized further in this study to evaluate the predictive ability of the unadjusted Golden Downs model.

II. REMEASUREMENTS OF PLOTS ON FERTILIZER TRIALS IN GOLDEN DOWNS.

Since about 1968, numerous fertilizer trials have been established in radiata pine stands in Golden Downs. After the screening described earlier, five of these trials were deemed appropriate for use in this study. Data from each consisted of yearly measurements of basal area, stocking and top height (top height as defined and derived in the review by McEwen, 1978) at the beginning of a trial, and generally each year for four years following fertilization. Additionally, sectional measurements of individual trees were done at the beginning of a trial and in some year after trial establishment -- usually four years later. Sectional measurements were done in accord with the taper step procedure described in Whyte(1974); this procedure is outlined in Appendix 1. All trials were located on Spooner Hill soils. Details of the five chosen trials, identified by codes N261, N262, N378, N379, and N386, are given in the following sections.

(1) <u>N261</u>

Trial N261 was established in 1969 when the radiata pine crop was 44 years old and was remeasured each following year for four years. There were six plots, three which were unfertilized controls and three which were fertilized with

269 kg/ha nitrogen, 112 kg/ha phosphorous, and 9 kg/ha boron. At age 44, basal area ranged from 56.7 to 71.1 m^2/ha, stocking from 309 to 408 stems/ha, and top height from 37.2 to 40.2 m. The trial was neither thinned nor re-fertilized after establishment in 1969. Sectional measurements were taken at trial establishment in 1969 and four years later in 1973, but the screening resulted in all 1969 measurements being discarded.

(2) N262

Trial N262 was established in 1969 when the radiata pine crop was 6 years old and was remeasured each following year for six years. The number of plots and treatment was identical to N261. At age 6, basal area ranged from 6.2 to 12.7 m^2/ha, stocking was 1481 stems/ha throughout, and top height ranged from 6.8 to 9.1 m. The trial was thinned in 1974 at age 11 to approximately 350 stems/ha; the trial was not re-fertilized. Sectional measurements were taken at trial start in 1969 and four years later in 1973; however, screening again resulted in all 1969 measurements being discarded.

(3) N378

Trial N378 was established in 1974 when the radiata pine crop was 7 years old and was remeasured each following year for nine years. There were twelve plots, three of each of the following treatments: no fertilizer, 100 kg/ha nitrogen, 200 kg/ha nitrogen, and 300 kg/ha nitrogen. At age 7, basal area ranged from 4.5 to 6.1 m^2/ha, stocking from 333 to 511 stems/ha, and top height from 7.6 to 10.8 m. In 1977 at age 10, one block (four plots, one of each treatment) was severely windblown; data from this block were discarded until 1978. In 1978 at age 11 the entire trial was thinned to approximately 265 stems/ha and each plot was refertilized with its original application rate. For most of the trial, sectional measurements were taken in 1974 at age 7 and 1978 at age 11. For the block that was windblown in 1977, all downed trees were sectionally measured.

(4) N379

Trial N379 was established in 1974 when the radiata pine crop was 15.6 years old and remeasured each following year for five years. There were 12 plots, each of which received an initial dressing of 9 kg/ha boron. There were four treatments, three plots of each of the following: neither nitrogen nor phosphorous, 45 kg/ha nitrogen and 50 kg/ha phosphorous, 108 kg/ha nitrogen and 120 kg/ha phosphorous, and 216 kg/ha nitrogen and 240 kg/ha phosphorous. At 15.6 years of age basal area ranged from 14.3 to 23.4 m^2/ha, stocking from 190 to 360 stems/ha, and top height from 21.2 to 24.1 m. This trial was neither thinned nor re-fertilized after establishment in 1974. Sectional measurements were taken in 1977 at age 18.2 and 1978 at age 19.

(5) N386

Trial N386 was established in 1976 when the radiata pine crop was 8 years of age and remeasured each following year for four years. There were 12 plots each of which received an initial dressing of 50 kg/ha phosphorous and 8 kg/ha boron. There were four treatments, three plots of each of the following: no nitrogen, 100 kg/ha nitrogen, 200 kg/ha nitrogen, and 300 kg/ha nitrogen. At age 8 basal area ranged from 2.5 to 3.9 m^2/ha, stocking from 311 to 422 stems/ha, and top height from 6.6 to 8.0 m. Sectional measurements were taken in 1976 at age 8 and in 1980 at age 12.

III. DATA TO VALIDATE THE ADJUSTED GROWTH MODEL

The fertilizer trials described in the previous section were used both to derive a fertilizer adjustment for the Golden Downs model and to evaluate that adjustment. The literature reviewed in Chapter 2, however, suggested that any model derived should, if possible, also be evaluated using data independent of those used to derive the model; this procedure is termed "validation". However, because the unadjusted model was derived using all data from all unfertilized P.S.P.s in Golden Downs, no independent unfertilized data were available making it impossible to validate the unadjusted model. For the adjusted model, however, measurements were available from P.S.P.s of operationally fertilized stands (as opposed to fertilizer trials). Data were collated for all stands in Golden Downs which had been operationally fertilized, which had a P.S.P. measurement before fertilization, and which had one or more re-measurements after fertilization. Unfortunately, this amounted to only 11 observations, a relatively low number for reliable validation. Consequently in September 1983 as part of this study, seven additional plot remeasurements for stocking, basal area, and top height were conducted on suitable P.S.P.s to expand the validation data set to 18 observations.

These data were outside the range of the trial data used to construct the adjusted model in many places. Age of fertilization was from 14.3 to 16.3 years, age of measurements after fertilization were from 15.0 to 21.2 years, stocking at fertilization was from 130 to 240 stems/ha, basal area was from 7.2 to 12.3 m^2/ha, and top height was from 15.9 to 20.4 m. Treatments present were 200 kg/ha nitrogen 100 kg/ha phosphorous and 4 kg/ha boron, 200 kg/ha nitrogen and 100 kg/ha phosphorous, 200 kg/ha nitrogen 96 kg/ha phosphorous and 12 kg/ha boron, and 100 kg/ha nitrogen and 50 kg/ha phosphorous.

IV. DATA FOR AREAS OTHER THAN GOLDEN DOWNS

After completion of calibration and validation of the adjusted model, in order to examine the possibility of broadening the applicability of the adjusted Golden Downs model to other areas in Nelson, fertilizer trial data and P.S.P. measurements of unfertilized stands from areas other than Golden Downs were used. Most of the fertilizer trials used also had sectional measurements taken on them so that a comparision of volume estimates was also possible.

The four areas for which it was felt sufficient data existed for a valid comparison were Pigeon Valley, Motueka, Harakeke, and Rabbit Island. Although these are geographical localities, the data for these four areas were actually stratified according to soil type (Chittenden *et al.*, 1966). Hence, most data for Pigeon Valley actually were from the geographical area Pigeon Valley but those which were not were on Stanley Hill soils, the predominant soil type in Pigeon Valley. Likewise, data for Motueka were mainly from Motueka but were all on Rosedale Hill soils, data for Harakeke were mainly from Harakeke but all were on Mapua Hill soils, and in the case of Rabbit Island, all data were from Rabbit Island and were on Tahunanui Sand and Gravel soils.

(1) Pigeon Valley

(a) Fertilizer Trials

(i) N238. Trial N238 was established in 1969 when the radiata pine crop was 23 years old and was remeasured each following year for four years. There were six plots, three unfertilized controls and three fertilized with 269 kg/ha nitrogen, 112 kg/ha phosphorous, and 9 kg/ha boron. At establishment, basal area ranged from 26.6 to 42.8 m^2/ha, stocking from 358 to 655 stems/ha, and top height from 23.9 to 30.2 m. The trial was neither thinned nor re-fertilized after establishment in 1969. Sectional measurements were taken at trial establishment in 1969 and in 1973, but screening resulted in all measurements from 1969 being discarded.

(ii) N239. Trial N239 was established in 1969 when the radiata pine crop was 8 years old and was remeasured each following year for 14 years. There were six plots; treatment of the six was identical to N238. In 1969, basal area ranged from 4.9 to 7.3 m^2/ha stocking from 1432 to 1481 stems/ha, and top height from 7.2 to 8.6 m. In 1974, the entire trial was thinned and plots originally fertilized received an additional 269 kg/ha nitrogen. Although remeasured until 1978, data for this period were missing and/or inconsistent, particularly top height, resulting in all data for this trial from 1974 to 1978 being discarded. In 1978 at age 17, the trial was further thinned to approximately 250 stems/ha and approximately 8.0 m^2/ha basal area. Furthermore, originally fertilized plots received yet another 269 kg/ha nitrogen. Sectional measurements were taken in 1969, 1973, 1978, and 1982, but screening resulted in all 1969 measurements being discarded.

(iii) N392. Trial N392 was established in 1974 when the radiata pine crop was 6 years old and was remeasured each following year for nine years. There were 12 plots, all of which received an initial treatment of 75 kg/ha phosphorous. There were four treatments, three plots of each of the following: no nitrogen, 100 kg/ha nitrogen, 200 kg/ha nitrogen, and 300 kg/ha nitrogen. When established basal area ranged from 3.0 to 6.8 m^2/ha, stocking from 656 to 667 stems/ha, and top height from 6.4 to 8.5 m. In 1978, the trial was thinned to approximately 265 stems/ha, and plots received a re-application of the amount of nitrogen originally applied. Sectional measurements were taken in 1974, 1978, and 1982.

(b) Unfertilized Stands. There was a paucity of data for other areas on Stanley Hill soil. Only six additional observations were available from the P.S.P. system ranging in age from 12 to 16 years, stocking from 933 to 1733 stems/ha, and basal area from 39.1 to 55.5 m^2/ha.

(2) Motueka

(a) Fertilized Stands

(i) N193. Trial N193 was originally established in 1968 when the radiata pine crop was 1 year old and remeasured for height each following year for seven years until 1975. In 1975, it was thinned and treated with fertilizer in different amounts than the 1968 treatment. After 1975, the trial consisted of 15 plots, six unfertilized control plots, three plots of 75 kg/ha phosphorous which considered unfertilized for reasons explained earlier, three plots of 150 kg/ha nitrogen, and three plots of 150 kg/ha nitrogen and 75 kg/ha phosphorous. In 1975, basal area ranged from 1.3 to 9.6 m^2/ha stocking from 716 to 741 stems/ha, and top height from 4.7 to 10.7 m. The trial was neither thinned nor re-fertilized after the re-fertilization of 1968. Sectional measurements were taken in 1975 at age 7 and 1979 at age 11.

(ii) N195. Trial N195 was originally a cultivation-fertilizer trial consisting of 24 plots established in 1968 when the radiata pine crop was 1 year old and remeasured for height each follwing year for seven years until 1975. In 1975, cultivation (discing or ripping) was repeated and plots were refertilized with a different rate of fertilizer than originally applied. As a result of cultivation, data from only six plots from this trial could be utilized in this study: three unfertilized controls and three plots which received 75 kg/ha phosphorous in 1975 which were considered unfertilized for reasons mentioned earlier. In 1975, basal area ranged from 2.9 to 7.5 m^2/ha, stocking from 716 to 741 stems/ha, and top height from 7.1 to 9.4 m. The trial was neither thinned nor re-fertilized after the re-fertilization of 1975 up to 1979 when it ceased being remeasured. Sectional measurements were taken in 1975 at age 7 and 1979 at age 11.

(b) Unfertilized Stands. From the P.S.P. system, data for many unfertilized plots on Rosedale Hill soils were available; about 100 remeasurement observations covering a wide range of stands were available. Age of these observations ranged from 9 to 47 years, basal area from 14.6 to 72.2 m^2/ha and stocking from 173 to 1833 stems/ha.

(3) Harakeke

(a) Fertilized Stands

(i) N191. Trial N191 was established in 1968 when the radiata pine crop was 14 years old and was remeasured in periods of generally one or two years for 15 years. This trial originally consisted of 54 plots but, due to lack of height measurements, five plots were rejected completely and many remeasurements of many plots had to be rejected for the same reason. All plots received an initial dressing of 9 kg/ha of boron. Of the 49 plots used in this study, six were controls, five received 69 kg/ha nitrogen, six received 139 kg/ha nitrogen, six received 208 kg/ha nitrogen, six which were also considered controls for reasons explained earlier received 112 kg/ha phosphorous, six received 69 kg/ha nitrogen and 112 kg/ha phosphorous, six received 139 kg/ha nitrogen and 112 kg/ha phosphorous, and six received 208 kg/ha nitrogen and 112 kg/ha phosphorous. At age 14 in 1968, basal area ranged from 11.6 to 28.9 m^2/ha, stocking from 420 to 889 stems/ha, and top height from 17.1 to 25.5 m. The trial was neither thinned nor re-fertilized after establishment in 1968. No sectional measurements were done on this trial.

(ii) N263. Trial N263 was established in 1969 when the radiata pine crop was 29 years old and was remeasured each following year for four years. The trial consisted of six plots, three unfertilized controls and three plots which received 269 kg/ha nitrogen, 112 kg/ha phosphorous, and 9 kg/ha boron. In 1969 at age 29, basal area ranged from 28.3 to 57.8 m^2/ha, stocking from 346 to 593 stems/ha, and top height from 28.7 to 38.5 m. The trial was neither thinned nor re-fertilized after establishment in 1969. Sectional measurements were taken in 1969 at age 29 and 1973 at age 33, but screening resulted in all measurements from 1969 being discarded.

(iii) N305. Trial N305 was established in 1972 when the radiata pine crop was 4 years old and was remeasured four and five years after 1972. The trial consisted of 14 line plots with ten trees in each line. Two plots were discarded due to being treated in three successive years. Of the remaining 12 plots, four were controls, two received 168 kg/ha nitrogen, four received 112 kg/ha phosphorous, and two received 168 kg/ha nitrogen and 112 kg/ha phosphorous. In 1972 at age 4 basal area ranged from 1.6 to 3.0 m^2/ha stocking was 741 stems/ha throughout, and top height ranged from 4.7 to 6.5 m. The trial was neither thinned nor re-fertilized after establishment in 1972. Sectional measurements were taken in 1977 at age 9.

(iv) N435. Trial N435 was established in 1975 when the radiata pine crop was 7 years old and remeasured each following year for four years. The trial consisted of 12 plots each of which received an initial application of 10 kg/ha boron. Furthermore, all plots save the three controls received 100 kg/ha nitrogen. Of the nine remaining plots, three received 25 kg/ha phosphorous, three received 50 kg/ha phosphorous, and three received 75 kg/ha phosphorous. In 1975 at age 7 basal area ranged from 1.8 to 4.7 m^2/ha, stocking was 543 stems/ha throughout, and top height ranged from 6.2 to 9.5 m. The trial was neither thinned nor re-fertilized after establishment in 1975. Sectional measurements were taken in 1975 at age 7 and 1979 at age 11.

(b) Unfertilized Stands. As was the case in Motueka, the P.S.P. system provided copious amounts of data for unfertilized plots on Mapua Hill soils; roughly 120 remeasurement observations were available. Age of the observations ranged from 7 to 33 years, basal area from 3.6 to 55.6 m^2/ha and stocking from 123 to 1852 stems/ha.

(4) Rabbit Island

(a) Fertilized Stand -- N434. Trial N434 was established in 1976 when the radiata crop was 8 years old and was remeasured each follwoing year for four years. The trial consisted of 15 plots but three plots were discarded due to being fertilized in three successive years. Of the remaining 12, three were unfertilized controls, three received 100 kg/ha nitrogen, three received 200 kg/ha nitrogen, and three received 300 kg/ha nitrogen. In 1976 at age 8, basal area ranged from 9.2 to 9.8 m^2/ha, stocking was 500 stems/ha throughout, and top height ranged from 13.7 to 15.5 m. The trial was neither thinned nor re-fertilized after establishment in 1976. Sectional measurements were taken in 1976 at age 8 and 1980 at age 12.

(b) Unfertilized Stands. Approximately 40 observations from the P.S.P. system on Tahunanui Sand and Gravel soils were available. Age ranged from 5 to 40 years, basal area from 2.8 to 67.2 m^2/ha and stocking from 138 to 1728 stems/ha.

From the specific data presented for each area, the five general types of data described at the beginning of this chapter were collated. Table 2 presents a summary of all data used in this study.

Table 2. Summary of data.

FERTILIZED STANDS

Trial (Plts)	Year Esta. (Yrs. Meas.)	At Establishment: Age (yrs)	Stems (/ha)	Basal Area (m^2/ha)	Top Height (m)	Treatments[1)] (kg/ha)
GOLDEN DOWNS						
N261 (6)	1969 (4)	44	309 to 408	56.7 to 71.1	37.2 to 40.2	Unfertilized, 269N 112P 9B
N262 (6)	1969 (6)	6	1481	6.2 to 12.7	6.8 to 9.1	Unfertilized, 269N 112P 9B
N378 (12)	1974 (9)	7	333 to 511	4.5 to 6.1	7.6 to 10.8	Unfertilized, 100N,200N,300N
N379 (12)	1974 (5)	15.6	190 to 360	14.3 to 23.4	21.2 to 24.1	9B,45N 50P 9B, 108N 120P 9B, 216N 240P 9B
N386 (12)	1976 (4)	8	311 to 422	2.5 to 3.9	6.6 to 8.0	50P 8B, 100N 50P 8B, 200N 50P 8B, 300N 50P 8B
GOLDEN DOWNS VALIDATION DATA						
---- (--)	---- (-)	14.3 to 16.3	130 to 240	7.2 to 12.3	15.9 to 20.4	100N 50P, 200N 100P, 200N 100P 4B, 200N 100P 12B
PIGEON VALLEY						
N238 (6)	1969 (4)	23	358 to 655	26.6 to 42.8	23.9 to 30.2	Unfertilized, 269N 112P 9B
N239 (6)	1969 (14)	8	1432 to 1481	4.9 to 7.3	7.2 to 8.6	Unfertilized, 269N 112P 9B
N239 (6)	1978 (14)	17	247 to 272	8.4 to 15.6	17.7 to 21.3	Unfertilized, 269N
N392 (12)	1974 (9)	6	656 to 667	3.0 to 6.8	6.4 to 8.5	75P,100N 75P, 200N 75P, 300N 75P
N392 (12)	1978 (9)	10	256 to 278	5.7 to 10.5	13.3 to 16.3	75P, 100N 75P, 200N 75P, 300N 75P

1) N - Nitrogen P - Phosphorous B - Boron

Table 2. Summary of data.
(cont.)

FERTILIZED STANDS

Trial (Plts)	Year Esta. (Yrs. Meas.)	At Establishment: Age (yrs)	Stems (/ha)	Basal Area (m^2/ha)	Top Height (m)	Treatments (kg/ha)
MOTUEKA						
N193 (15)	1975 (4)	8	716 to 741	1.3 to 9.6	4.7 to 10.7	Unfertilized, 75P, 150N, 150N 75P
N195 (6)	1975 (4)	8	716 to 741	2.9 to 7.5	7.1 to 9.4	Unfertilized, 75P
HARAKEKE						
N191 (49)	1968 (15)	14	420 to 889	11.6 to 28.9	17.1 to 25.5	Unfertilized, 69N,139N,208N, 112P,69N 112P, 139N 112P, 208N 112P
N263 (6)	1969 (4)	29	346 to 593	28.3 to 57.8	28.7 to 38.5	Unfertilized, 269N 112P 9B
N305 (12)	1972 (5)	4	741	1.6 to 3.0	4.7 to 6.5	Unfertilized, 168N, 112P, 168N 112P
N435 (12)	1975 (4)	7	543	1.8 to 4.7	6.2 to 9.5	10B, 100N 25P 10B, 100N 50P 10B, 100N 75P 10B
RABBIT ISLAND						
N434 (12)	1976 (7)	8	500	9.2 to 9.8	13.7 to 15.5	Unfertilized, 100N,200N,300N

UNFERTILIZED STANDS

Area	No. Obs.	Data Range: Age (yrs)	Stems/ha	Basal Area (m^2/ha)
Golden Downs (Original data)	339	4.8 to 39.3	111 to 2831	1.1 to 88.9
Pigeon Valley	6	12 to 16	933 to 1733	39.1 to 55.5
Motueka	100	9 to 47	173 to 1833	14.6 to 72.2

Table 2. Summary of data.
(cont.)

UNFERTILIZED STANDS

Area	No. Obs.	Data Range: Age (yrs)	Stems/ha	Basal Area (m^2/ha)
Harakeke	120	7 to 33	123 to 1852	3.6 to 55.6
Rabbit Island	40	5 to 40	138 to 1728	2.8 to 67.2

SECTIONAL MEASUREMENTS

	No. of Trees Unf	Frt	Ages (yrs)	Range of dbh (cm)	Height Range (m)
Golden Downs	171	216	7,8,10,11, 12,18.2, 19,48	6.0 to 69.8	4.3 to 47.9
Pigeon Valley	172	165	6,8,10,12, 14,17,22,27	5.8 to 50.8	4.4 to 36.4
Motueka	180	30	7,11	2.4 to 28.4	2.3 to 18.5
Harakeke	79	77	7,9,11,29	4.6 to 67.8	3.9 to 43.4
Rabbit Island	51	45	8,12	12.3 to 28.5	11.9 to 25.3

CHAPTER 4

METHODOLOGY FOR FERTILIZER ADJUSTMENT FOR GROWTH

Of the data presented in the last chapter, only repeated measurements of stands in Golden Downs are used in this and the subsequent chapter. This chapter presents and briefly explains the theory and computations of the originally formulated model and the adjustment made to the model to incorporate fertilizer effect; Chapter 5 evaluates the adjusted model.

I. PRESENTATION OF THE GOLDEN DOWNS GROWTH MODEL

(1) Description

The following discussion of the Golden Downs growth model by Dr. O. Garcia of the New Zealand Forest Research Institute in Rotorua is more detailed than the brief discussion in Chapter 2. It is not, however, intended as an exhaustive discussion of the principles and theory on which the model is based but rather is intended to provide sufficient background so that it may be understood how and why the adjusted model was developed. For a discussion of model theory, the reader should see Garcia (1978).

The model is a system of differential equations in which the exact path along which stand growth will proceed is determined by site index (mean top height in m at age 20), basal area, stocking, and top height which are the initial inputs to the model, and for which basal area, stocking, and top height are specified at a desired starting age. Basal area, stocking, and top height are termed the "state variables". That is, they define the "state" that the system of equations is in at any given age. Growth to any successive age for each of the state variables proceeds along a certain path, or trajectory, defined by the state variables and the site index. Thinnings are handled by a redefinition of the state of the system -- i.e. a change in basal area, stocking, and possibly top height. Attention is again directed to Figs. 2 to 4; the surfaces in these figures give examples of trajectories for various stand and site conditions.

The Golden Downs model has been implemented as a computer program at a number of installations (e.g. F.R.I. Rotorua, Nelson Conservancy Office, and the University of Canterbury.) From initial inputs of site index, age, stocking, basal area, and top height the model produces estimates of the state variables for each year until the final year of the simulation that is specified by the user. At any age specified, a thinning may be done. The mathematical operation of the model is outlined below.

(2) Computations

As already mentioned, basal area (G), stocking (N), and top height (H) describe the state of the system at a given age t_1. Thus the state vector $\underline{X}$[1)] is defined as:

1) In the following discussion, matrices are indicated by underscoring, matrix representation is on the left and algebraic representation is on the right, and values of coefficients are presented in Appendix 2.

$$\underline{X} = \begin{pmatrix} G \\ N \\ H \end{pmatrix} \qquad \begin{aligned} X_1 &= G \\ X_2 &= N \\ X_3 &= H \end{aligned}$$

This state vector $\underline{X}$ is transformed to a state vector $\underline{Y}$:

$$\underline{Y} = \underline{X}^{\underline{c}} - \underline{a} \qquad \begin{aligned} Y &= G^{c_{11}} N^{c_{12}} H^{c_{13}} - a_1 \\ Y &= G^{c_{21}} N^{c_{22}} H^{c_{23}} - a_2 \\ Y &= G^{c_{31}} N^{c_{32}} H^{c_{33}} - a_3 \end{aligned}$$

where: $\underline{c} = \begin{matrix} c_{11} & c_{12} & c_{13} \\ 0 & c_{22} & 0 \\ 0 & 0 & c_{33} \end{matrix}$

and:

$$\underline{a} = \begin{matrix} 0 \\ a_2 \\ a_3 \end{matrix}$$

which given the values of zero for certain coefficients simplifies to:

$$\begin{aligned} Y &= G^{c_{11}} N^{c_{12}} H^{c_{13}} \\ Y &= N^{c_{22}} - a_2 \\ Y &= H^{c_{33}} - a_3 \end{aligned}$$

$\underline{Y}$ is then used in conjunction with $\underline{p}$ to yield $\underline{Z}$:

$$\underline{Z} = (\underline{p})\underline{Y} \qquad \begin{aligned} Z_1 &= (p_{11})Y_1 + (p_{12})Y_2 + (p_{13})Y_3 \\ Z_2 &= (p_{21})Y_1 + (p_{22})Y_2 + (p_{23})Y_3 \\ Z_3 &= Y_3 \end{aligned}$$

where:

$$\underline{p} = \begin{pmatrix} p_{11} & p_{12} & p_{13} \\ p_{21} & p_{22} & p_{23} \\ 0 & 0 & 1 \end{pmatrix}$$

A time factor b is calculated:

$$b = -\left(\left(\frac{1}{20-t0}\right)\ln\left(1-S^{\frac{c_{33}}{a_3}}\right)\right)$$

Then $\underline{Z}$ at time t_2 is obtained from the already-calculated $\underline{Z}$ at time t_1 and the time factor b:

$$Z_{t_2} = e^{(\underline{L})b(t_2-t_1)} Z_{t_1}$$

where: n=3

$$\underline{L} = \begin{matrix} L_{11} & 0 & 0 \\ 0 & L_{22} & 0 \\ 0 & 0 & L_{33} \end{matrix}$$

$$Z_{t_2} = e^{L_{11}(b(t_2-t_1))} Z_{t_1}$$
$$Z_{t_2} = e^{L_{22}(b(t_2-t_1))} Z_{t_1}$$
$$Z_{t_2} = e^{L_{33}(b(t_2-t_1))} Z_{t_1}$$

G, N, and H at time t_2 are obtained by using $\underline{Z}_{t_2}$ and the inverses of $\underline{p}$ and $\underline{c}$ ($\underline{q}$ and $\underline{d}$) respectively:

$$Y_{t_2} = (\underline{q})\,\underline{Z}_{t_2}$$

where:

$$\underline{q} = (\tfrac{1}{\underline{p}}) = \begin{matrix} q_{11} & q_{12} & q_{13} \\ q_{21} & q_{22} & q_{23} \\ 0 & 0 & 1 \end{matrix}$$

$$Y_1 = q_{11}(Z_1)+q_{12}(Z_2)+q_{13}(Z_3)$$
$$Y_2 = q_{21}(Z_1)+q_{22}(Z_2)+q_{23}(Z_3)$$
$$Y_3 = Z_3$$

$$\underline{X}_{t_2} = (\underline{Y}_{t_2}+\underline{a})^{\underline{d}}$$

$$\underline{d} = (\tfrac{1}{\underline{c}}) = \begin{matrix} d_{11} & d_{12} & d_{13} \\ 0 & d_{22} & 0 \\ 0 & 0 & d_{33} \end{matrix}$$

$$G_{t_2} = Y_1^{d_{11}} (Y_2+a_2)^{d_{12}} (Y_3+a_3)^{d_{13}}$$
$$N_{t_2} = (Y_2+a_2)^{d_{22}}$$
$$H_{t_2} = (Y_3+a_3)^{d_{33}}$$

The coefficients $\underline{c}$, $\underline{a}$, $\underline{p}$, $\underline{L}$, and t0 were estimated using maximum-likelihood estimators with the original model estimation data for Golden Downs described in the previous chapter; values of coefficients are presented in Appendix 2. (This brief outline of the calculations of the model is from Garcia, N.Z. J. of For. Sci., in prep.)

Before adjustment of the model to incorporate fertilizer effect could take place, it was necessary to evaluate exactly which of stocking, basal area, and top height needed to be adjusted. The literature reviewed in Chapter 2 suggested that basal area would almost certainly need to be adjusted, while top height and stocking may or may not need adjustment. To evaluate this, the stand growth data from the fertilizer trials in Golden Downs were analyzed using a number of statistics. Since these are the statistics to be used in this and subsequent chapters, they are presented and explained here in detail.

II. STATISTICS USED FOR EVALUATION OF METHODOLOGIES

As stressed in the literature reviewed in Chapter 2, thorough evaluation is mandatory for any computer growth model. As such, the selection of statistics for evaluation of methodology is critical. In many studies where linear regression is employed, standard errors of regression (SE_r) and coefficients of determination (R^2) are used to evaluate alternative equations. Though these statistics are provided in this thesis where the use of linear regression is employed, they are provided only for reference, and were not used to evaluate alternative models. These statistics simply provide an overall measure of variation of the data, which is of limited value in this study.)

These two statistics are of questionable relevance for model evaluation in this study because two assumptions of regression were repeatedly violated. First, observations could not be considered independent because many data were repeated measurements of the same experimental unit. Second, graphs of residuals revealed that the variances around regression lines in this study were not constant; variance increased with an increase in the independent variable(s). For example, for estimation of stand growth, variance increased with the length of the prediction period. (See standard errors and maximum residuals in Figs. 5, 6, and 7.)

Because of these problems with R^2 and SE_r, predictions from regression equations were evaluated in a more detailed manner; five other statistics, all of which concern residuals, were used for model evaluation. To calculate residuals for any variable of interest, a regression equation was first derived to estimate that variable. The equation derived was then used to estimate that variable for either the data set used to derive the equation, or an independent data set, if available. The residual or error term E for a given observation was then defined as:

$$E = \text{Actual} - \text{Predicted} \tag{2}$$

so that a negative residual indicates an overestimate. The error term E, therefore, is a measure of the lack of fit of a regression line. After residuals were calculated, the five statistics used to describe the resulting set of residuals were calculated. The statistics used were chosen because it was felt they provide an adequate description of the set of residuals; The calculation and interpretation of each is explained in the following five sections.

(1) Mean Bias

Kendall and Buckland (1957) defined "bias" as:

"Generally, an effect which deprives a statistical result of representativeness by systematically distorting it, as distinct from a random error which may distort on any one occassion but balances out on the average."

In regression analysis, "bias" has generally been interpreted as a systematic deviation of predictions from the true population values. In some studies, however, "bias" has been defined as the mean difference between actual values and values predicted by a regression line; notably, this is the case with studies concerning taper equations. Demaerschalk (1973) defined mean bias (MB) as:

$$MB = \frac{(\Sigma E)}{n} \tag{3}$$

This definition of bias was also adopted in subsequent taper studies (Max and Burkhart 1976, Demaerschalk and Kozak 1977, Cao *et al*. 1980, and others). Because much of the subsequent analysis in this thesis is concerned with taper equations, this definition of bias is adopted throughout. That is, in this thesis, "bias" is the difference between what a regression equation predicts and the observed value for a given quantity; for consistency, this definition applies whether discussing taper equations, or estimates of stand growth from the adjusted model.

Therefore, for any parameter estimated, it is desired to have a mean bias of zero, because this would indicate that any equation(s) used to produce parameter estimates will not have a tendency to consistently under- or overestimate a parameter. Hence, mean bias should be considered a measure of accuracy as it is indicative of how close to zero the mean residual is. For linear regression, the mean bias of all data used to derive an equation is zero by definition. However, because mean bias was examined in a number of ways, this does not eliminate the value of mean bias for equation evaluation in this study. For example, for adjusted model evaluation, mean bias was examined for each year following fertilization; for taper equations, the mean bias of diameter estimates was examined at various points on the stem using observations reserved from equation fitting.

(2) Standard Error of Bias

Because any set of observations can only be considered a sample of all possible observations, it is desirable to know how the sample means are distributed. As such, the standard error of the error terms E was calculated. Because the measure of lack of fit has been termed "mean bias", for consistency the standard error of the error terms has been termed the "standard error of the bias" (SEB) and is calculated:

$$SEB = \sqrt{\frac{\Sigma E^2 - \frac{(\Sigma E^2)}{n}}{(n(n-1))}} \qquad (4)$$

The standard error of bias is a measure of the variance of the sample means of the residuals (E). If standard error of bias is zero, it is indicative that there is a constant difference between the true value of a parameter and the value estimated by the equation(s) under consideration. For example, if an equation consistently overestimates top height by 1.0 m, the standard error of bias would equal 0.0 m; the mean bias, however, would be -1.0 m.

(3) t value

The t value (t) is a measure of whether or not the mean bias is significantly different from zero. It is calculated:

$$t = \frac{MB}{SEB} \tag{5}$$

and has well-defined statistical properties that allow the significance of the bias to be determined. For example, if the mean bias for top height estimates is -0.2 m and is determined to be significant by virtue of comparison of its t value with a tabled t value for an alpha level of 0.01, it is indicative that top height has a tendency to be overestimated by a regression line by 0.2 m with only a 1% chance of the MB actually having arisen by chance in sampling from a population with no bias. In this thesis where t is employed, a calculated t that exceeds the tabled t for 5% is considered "significant" and is denoted with one star ("*"); a calculated t that exceeds the tabled t for 1% is considered "highly significant" and is denoted with two stars ("**").

Admittedly, the use of the t statistic assumes that the residuals (E) are normally distributed which may be a questionable assumption, particularly when using the unadjusted model to estimate the growth of fertilized stands, considering that the unadjusted model may not be "correctly specified" for fertilized stands. However, it is felt that the t statistic is robust enough to assume that the residuals are normally distributed.

(d) Maximum Residual

Because methodologies presented in this thesis that estimate stand parameters are ultimately intended for use by land managers, it was felt desirable to provide such users with a statement of the accuracy of estimates. For testing accuracy, Freese (1960) proposed the chi-squared statistic:

$$\chi^2 = \frac{(\Sigma E^2)}{\frac{A^2}{t^2}} \tag{6}$$

where: A = allowable error
t = is two-tailed probability from the t table at a selected alpha level where the degrees of freedom are equal to infinite

for which A is generally specified a priori. The chi-squared value calculated from the observed residuals, E, is then compared to a tabular value to determine if the desired accuracy (A) has been obtained. However, if Equ. 6 is rearranged to solve for A as a function of t, χ^2, and the sum of squares of the E_is, an indication of the accuracy of estimates for a given parameter is obtained. This statistic was calculated in this thesis with an alpha level of 0.01 and, because it gives an indication of the size of the absolute value of the larger residuals in a distribution, is termed the maximum residual (MR). For example, a maximum residual of 1.0 m for the equation for estimating top height indicates that the top height equation will be accurate to within 1.0 m unless a 1-in-100 chance has occurred. As with the t statistic, the maximum residual is based on a questionable assumption about the way residuals are distributed. However, it is felt that chi-squared is also robust enough to account for this.

(5) Standard Error as a Percent of the Mean

Because of the heteroscedastic nature of many distributions of residuals in this study, it was felt inappropriate to compare directly standard errors and/or maximum residuals to evaluate equations for the different geographical areas mentioned in Chapter 2. In the case of volume, for instance, it could be expected that low-volume stands would have lower standard errors and maximum residuals than high-volume stands; a direct comparison of these quantities would therefore be meaningless. Therefore, to more adequately provide for this type of comparison, it was felt that a measure of relative precision was necessary. The statistic used was the percent standard error (SE%) and is calculated:

$$SE\% = \left(\frac{SEB}{Mean}\right)100 \qquad (7)$$

where: SEB is standard error of bias for the parameter of interest
Mean is the mean value for the parameter of interest

The percent standard error will allow a comparison of precision for different geographical areas. For example, if estimates of top height for Golden Downs have a standard error of bias of 0.1 m and the mean top height of Golden Downs observations is 10.0 m, and estimates of top height for Pigeon Valley have a standard error of bias of 0.2 m and a mean top height of 20.0 m, the precision of estimates of the two areas may be viewed as about the same since both have a percent standard error of 1.00. Admittedly, this statistic assumes that the heteroscedasticity of the distribution of residuals of the two areas is similar. Since this is somewhat of a questionable assumption, it is stressed that the percent standard error is considered to give only an indication of relative precision and is not meant as a definitive statistic. It should be recognized that, while exact comparisons of percent standard errors for different geographical areas is not entirely appropriate, percent standard error nonetheless is of limited use in this study.

III. INCORPORATION OF FERTILIZER EFFECT INTO THE MODEL

Before the methodology and rationale of the adjusted model may be presented, it is first necessary to explain two points. Firstly, in any time-series growth data the observations may take any one of three forms. There may be one year increments to time n ($t_1 - t_2$, $t_2 - t_3$, ... $t_{n-1} - t_n$), increments to t_n with a base of t_1 for each measurement ($t_1 - t_2$, $t_1 - t_3$, ... $t_1 - t_n$), or increments always to t_n ($t_1 - t_n$, $t_2 - t_n$, ... $t_{n-1} - t_n$). Which form is chosen depends on the objectives of the study. In this study, because it was desired to take stand conditions at t_1 and project them forward year by year, the second form seemed most appropriate because of limitations of the data itself. Data existed for this study usually up to only four years following fertilization. Any alteration to the model, therefore, had to be done with the idea that the most important point is four years after fertilization, as this is the point at which the adjusted model will take stand conditions and project them forward using the assumption that fertilizer no longer has a direct effect on stand development. If the first form of the data (one-year steps) was used, it seemed likely that variance would be introduced at each one-year step causing relatively poor estimates of stand conditions four years after fertilization; this also was borne out in subsequent analysis. If the third form were selected, it would have been similar to assuming that stand growth would in practice be estimated backwards from four years after fertilization to some year prior to that point; this is inconsistent with how the adjusted model works, however. Consequently, the second form of the data was used throughout this study.

Secondly, due to the nature of the Golden Downs data, analyses were tabulated two ways. Because of a continuum in the data from age 6 to age 20, and then a complete gap in data to age 44 (see Table 2), results are presented for both the entire data set and for a subset of observations less than 44 years of age.

(1) Evaluation of The Need for Model Adjustment

Before proceeding with model adjustment, it was necessary to determine what, if anything, needed to be adjusted. To do this, time-series data from the fertilizer trials were "grown" by the unadjusted model from the initial measurement to each subsequent re-measurement; estimates were compared with actual re-measurements and residuals calculated and analyzed. The results of this analysis are presented in Table 3 and Fig. 5. It is again noted here that not all observations tabulated as "unfertilized" in

Table 3. Reliability of estimates of growth from the unadjusted model for unfertilized and fertilized stands in Golden Downs.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED(All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.10	0.103	-0.984	0.91	0.50	19.2	21
2	0.53	0.290	1.838	2.24	1.51	19.4	15
3	0.14	0.287	0.501	2.41	1.27	22.6	20
4	0.42	0.328	1.281	2.59	1.40	23.6	17
5	--	--	--	--	--	--	0
6	-0.15	0.124	-1.236	0.34	0.70	16.8	3
Total	0.20	0.124	1.639	2.38	0.59	21.0	76
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.30	0.103	2.925**	1.06	0.47	21.5	21
2	0.36	0.197	1.839	1.52	0.81	24.1	15
3	0.44	0.197	2.213*	1.85	0.71	27.3	20
4	0.24	0.262	0.920	2.02	0.87	29.8	17
5	--	--	--	--	--	--	0
6	0.02	0.141	0.108	0.29	1.09	12.9	3
Total	0.32	0.091	3.577**	1.85	0.36	25.1	76
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	4.0	0.95	4.262**	11.3	0.19	506.7	21
2	10.2	2.78	3.665**	26.9	0.48	585.3	15
3	13.0	3.68	3.527**	39.5	0.73	507.7	20
4	19.3	5.99	3.226**	57.7	1.11	541.8	17
5	--	--	--	--	--	--	0
6	1.9	0.15	13.115**	2.8	0.04	345.7	3
Total	10.9	1.84	5.925**	42.2	0.35	524.0	76
UNFERTILIZED(Stands less than 44 years of age)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.00	0.100	0.043	0.78	0.59	15.9	18
2	0.19	0.138	1.386	0.89	0.91	13.7	12
3	-0.13	0.194	-0.655	1.48	0.98	19.2	17
4	0.19	0.225	0.823	1.53	1.14	19.5	14
5	--	--	--	--	--	--	0
6	-0.15	0.124	-1.236	0.34	0.74	16.8	3
Total	0.04	0.081	0.452	1.34	0.45	17.2	64

Table 3. (cont.) Reliability of estimates of growth from the unadjusted model for unfertilized and fertilized stands in Golden Downs.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED (Stands less than 44 years of age)							
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.29	0.116	2.483*	1.05	0.82	14.1	18
2	0.28	0.226	1.226	1.44	1.71	13.2	12
3	0.47	0.226	2.082	1.92	1.13	20.0	17
4	0.37	0.308	1.185	2.14	1.44	21.4	14
5	--	--	--	--	--	--	0
6	0.02	0.141	0.108	0.29	1.09	12.9	3
Total	0.34	0.103	3.281**	1.90	0.61	17.0	64
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	3.8	1.10	3.449**	11.1	0.21	529.3	18
2	10.0	3.50	2.846*	45.3	0.55	638.9	12
3	12.3	4.32	2.852*	39.9	0.81	531.8	17
4	19.7	7.29	2.695*	60.1	1.26	579.3	14
5	--	--	--	--	--	--	0
6	1.9	0.15	13.115**	2.8	0.04	345.7	3
Total	10.6	2.17	4.878**	43.5	0.39	552.8	64
FERTILIZED (All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.08	0.070	1.169	1.04	0.38	17.2	49
2	-0.06	0.097	-0.604	1.10	0.54	15.4	32
3	-0.02	0.093	-0.201	1.34	0.44	21.3	48
4	0.32	0.159	2.016	2.12	0.73	21.8	39
5	--	--	--	--	--	--	0
6	-0.28	0.101	-2.793	0.54	0.63	16.0	3
Total	0.08	0.053	1.422	1.59	0.27	19.0	171
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.87	0.109	7.985**	2.43	0.69	15.9	49
2	1.53	0.302	5.053**	4.59	1.78	17.0	32
3	1.70	0.251	6.775**	5.08	1.04	24.1	48
4	1.98	0.318	6.224**	5.73	1.23	25.9	39
5	--	--	--	--	--	--	0
6	0.48	0.273	1.768	0.91	1.84	14.8	3
Total	1.47	0.124	11.916**	4.99	0.60	20.7	171

Table 3. Reliability of estimates of growth from the (cont.) unadjusted model for unfertilized and fertilized stands in Golden Downs.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
FERTILIZED(All Stands)							
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.1	0.60	3.524**	9.8	0.15	405.7	49
2	4.6	1.46	3.118**	18.8	0.32	458.8	32
3	7.3	1.54	4.715**	26.9	0.39	399.0	48
4	11.0	2.54	4.349**	39.4	0.60	421.1	39
5	--	--	--	--	--	--	0
6	2.0	0.08	26.860**	3.0	0.02	362.3	3
Total	6.1	0.82	7.335**	28.2	0.20	416.5	171
FERTILIZED(Stands less than 44 years of age)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.05	0.063	0.774	0.92	0.34	16.7	48
2	-0.06	0.102	-0.571	1.11	0.64	13.8	30
3	-0.02	0.097	-0.228	1.35	0.49	20.0	45
4	0.17	0.123	1.369	1.52	0.60	20.0	36
5	--	--	--	--	--	--	0
6	-0.28	0.101	-2.793	0.54	0.63	16.0	3
Total	0.03	0.047	0.631	1.21	0.25	17.8	162
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.84	0.107	7.854**	2.35	0.72	14.9	48
2	1.69	0.287	5.903**	4.59	2.08	13.8	30
3	1.86	0.245	7.575**	5.15	1.16	21.2	45
4	2.20	0.312	7.061**	5.86	1.39	22.4	36
5	--	--	--	--	--	--	0
6	0.48	0.273	1.768	0.91	1.84	14.8	3
Total	1.58	0.121	12.949**	4.47	0.67	18.1	162
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.0	0.60	3.345**	9.7	0.15	405.6	48
2	4.6	1.55	2.962**	19.1	0.33	466.7	30
3	6.9	1.62	4.278**	26.7	0.40	401.5	45
4	10.8	2.74	3.936**	39.8	0.64	426.3	36
5	--	--	--	--	--	--	0
6	2.0	0.08	26.860**	3.0	0.02	362.3	3
Total	5.8	0.86	6.752**	25.0	0.21	419.6	162

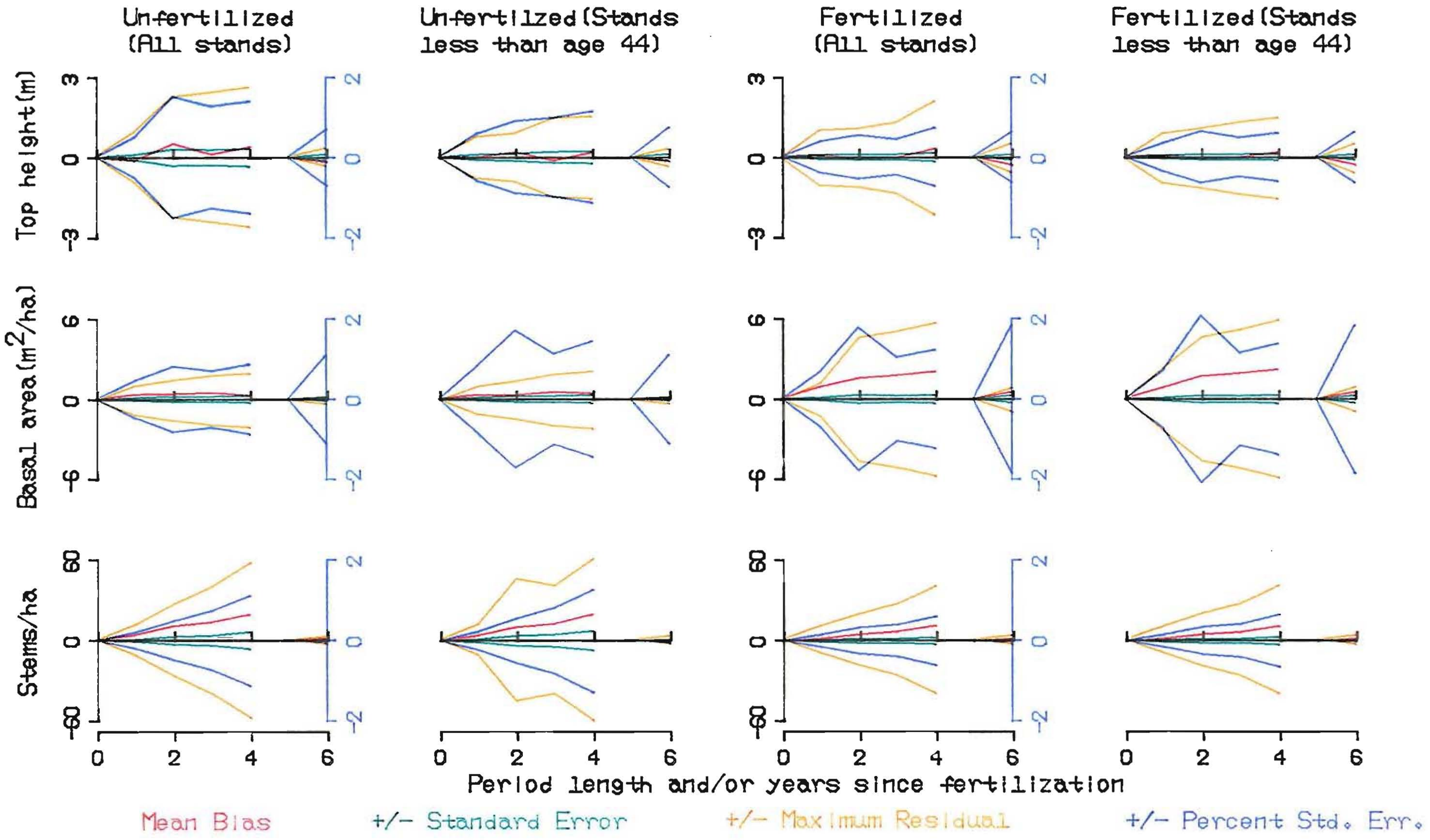


Fig. 5. Graphical depiction of reliability of estimates as presented in Table 3.

Table 3 and Fig. 5 actually were unfertilized. Due to the nature of the trials, all controls were treated as unfertilized despite the controls for N379 and N386 being given initial fertilizer dressings. Whether the assumption of these as unfertilized is reasonable will be checked later in this section.

Another point to note before discussing Table 3 and Fig. 5 concerns the tabulation of results under the heading of "Years Since Fertilization". This heading is used throughout this thesis in all tables that present analysis of residuals for growth of fertilized stands. The term "Years Since Fertilization" when applied to unfertilized stands should be interpreted as the number of years since the start of the fertilizer trial that a particular observation is from. Furthermore, because of the stand growth data being used in the form t_1 to t_2, t_1 to t_3, etc. as explained before, in most cases "Years Since Fertilization" may also be interpreted as the length of the prediction period. One exception to this is for Golden Downs as may be seen in Fig. 5. Trial N262 was thinned four years after establishment but not re-fertilized. Consequently, the final remeasurement of N262 could not be grown by the model from the initial stand conditions to the remeasurement six years after fertilization due to the thinning occurring during that time. As a result, this measurement was tabulated in Table 3 as six years after fertilization but is properly represented in Fig. 5 as a one year prediction period beginning five years after fertilization.

What is most immediately apparent from Table 3 and

Fig. 5 is that in all cases stocking is significantly underestimated -- i.e. mortality is overestimated. This is due to the trials themselves intentionally being established in stands with low stocking so as to discourage natural mortality. Because of this, it was felt that any alteration of the mortality function of the model based on fertilizer effect would be unreliable outside the relatively narrow range of data of the Golden Downs fertilizer trials. Consequently, in subsequent analyses in this study, values for stocking estimates are not used to evaluate any model adjustment. Furthermore, the mortality function of the unadjusted model was not directly altered to incorporate the effect of fertilizer. However, it is noted that mortality will be indirectly affected if either the height function or basal area function is adjusted due to state-space approach of the unadjusted model. (See Section I in this chapter on the calculations of the model.)

The second thing that may be deduced from Table 3 and Fig. 5 is that top height does not need to be adjusted for fertilizer affect. Mean bias is statistically non-significant in all cases for top height estimation for both unfertilized and fertilized stands. Furthermore, both the standard errors and maximum residuals for top height are approximately the same on both unfertilized and fertilized stands. Moreover, estimates of standard errors of bias and maximum residuals for top height in Table 3 and Fig. 5 are in accord with those subsequently presented in Table 4 and Fig. 6. (The values in Table 4 and Fig. 6 result from using the model with the data originally used to derive the unadjusted model and may be considered a standard for comparison.) Further still, as has been discussed, the assumption that top height may be unaffected by fertilizer is certainly borne out by the literature. Although a height response to certain fertilzers has been noted by some in young radiata pine (Jacks et al., 1972, N.Z. For. Serv., 1977, and others), in older stands height response is either non-existent or insignificant (Jackson, 1973, Jacks et al., 1972, and others). Therefore, no adjustment was made on the height function of the model.

Basal area, however, is different from either stocking or top height. Basal area shows a definite response to fertilizer in that estimates of basal area are significantly positively biased throughout indicating that basal area of fertilized stands has been underestimated. Moreover, the standard errors, maximum residuals, and percent standard errors for basal area estimates of fertilized stands consistently exceed the values of these statistics for the unfertilized stands, indicating poorer precision of estimates for fertilized stands. The pattern of the basal area response may be seen by examining the mean bias as the length of the prediction period increases for both the set of all data and the subset of data less than 44 years old: mean bias increases in nearly straight-line fashion for two years and then begins to taper off. The same pattern is evident in the maximum residual. Both of these results imply that response of basal area to fertilizer is most in the first two years and then begins to taper off. The response suggested here is also in accord with current literature (Jacks et al., 1972, Mead, 1974, Shepard, 1981, and others). Consequently, it is apparent that a basal area adjustment for fertilizer response was necessary.

The final point to consider from Table 3 and Fig. 5 is the the assumption that the controls of N379 and N386 may be considered unfertilized. Since top height is unaffected by fertilization and stocking is unreliable, only basal area need be examined. Although some bias is evident in basal area estimates on unfertilized stands, it occurs soon after fertilization and has disappeared four years after fertilization. Furthermore, neither standard errors nor maximum residuals for basal area appear unusually large when compared to values subsequently presented in Table 4 and Fig. 6. (The mean bias figure for the "Total" (all observations) is of limited value in Table 3 and elsewhere generally because of the nature of the data set; due to correlation among observations, total mean bias will be an overestimate of the actual bias.) Hence, it appears reasonable to assume that, though the initial dressings of N379 and N386 may have had an effect on basal area soon after fertilization, the effect has worn off after four years and these treatments may thus be considered unfertilized.

(2) Adjustment of Basal Area For Fertilizer Effect

Conceptually, there were two possible ways to proceed to produce a basal area adjustment that would incorporate the effect of fertilization. One way was to alter the coefficients of the unadjusted model to reflect the effect of fertilizer given the stocking. basal area, and top height of a stand, the type and amount of fertilizer, and the number of years after fertilization. In fact, the coefficients of $\underline{L}$ (the eigenvalues of the system) of the unadjusted model theoretically are the only coefficients of the model that vary with site quality (not to be confused with site index) (Garcia, 1978); the term "site quality" is used because fertilizer may be considered to improve the quality of the site though not necessarily the site index, as seen by the response of basal area, but not top height, to fertilizer in this study. For any pair of repeated stand measurements, all three of the eigenvalues can be estimated using Z_i at t_1 and Z_i at t_2 (see Section I of this chapter on the calculations of the model) by the equation:

$$L_{ii} = \frac{\ln\left(\frac{(Z_{it_2})}{(Z_{it_1})}\right)}{(t_2-t_1)} \tag{8}$$

Using Equ. 8, the eigenvalues were estimated for every measurement pair of the Golden Downs fertilizer trials data and numerous attempts were made to develop functions to satisfactorily change the eigenvalues to reflect fertilizer effect. None, however, provided basal area estimates for fertilized stands as accurate and precise as the estimates from the unadjusted model for unfertilized stands. From graphs of eigenvalues over time following fertilization and correlations examined, the problem appeared to be no relationship of L_{33} to fertilization, little or no relationship of L_{22} to fertilization, and only a weak relationship of L_{11} with fertilization.

For example, the graphs of eigenvalues suggested that the effect of fertilizer on the eigenvalues was inversely proportional to the time since fertilization, and was also related to the rate of fertilization, the basal area and age at the time of fertilization, and the site index. Of the models examined, the function that proved most promising was:

$$L_{ii} = (b_1 (\frac{N_f}{t_p - t_f}) + b_2 (\frac{N_f P_f}{t_p - t_f}))(b_3 G_f + b_4 A_f + b_5 S) \qquad (9)$$

Using data from the Golden Downs fertilizer trials, the coefficients of this function were estimated for each of the three eigenvalues. As an indication of goodness-of-fit, for 247 observations, the R^2 for L_{11} was 0.236, for L_{22} was 0.091, and for L_{33} was 0.009. These functions were then used as the model adjustment and data from the fertilizer trials were used to evaluate this adjustment. Resulting estimates of basal area for fertilized stands were statistically non-biased, but standard errors, maximum residuals, and percent standard errors were approximately one and a half times larger than similar values for unfertilized stands from Table 3, and subsequent values presented in Table 4. Similar evaluations were done using only the functions for L_{11} and L_{22} as the adjustment, and only the function for L_{11} as the adjustment, but neither of these proved any more promising. Consequently, this approach to model adjustment was rejected and the alternative option for was examined.

The alternative way of proceeding was to develop a function external to the model that would alter unadjusted model estimates of basal area directly, rather than indirectly, by altering coeffiients of the model. To do this, it is possible to use stepwise multiple linear regression to select from numerous variables those that can quantify site-fertilizer interactions, or basal area-fertilizer interactions, etc. Andrew (in prep.) pointed out, however, that while this approach produces a function that best fits the available data, nonsense-estimates may be produced by such a function when used outside the range of the original data if no thought is given to the form of this function. To avoid this problem, more weight was given in this study to the form of the function rather than traditional goodness-of-fit statistics.

It was decided to model basal area response as three separate sub-models dealing with the elapsed time since fertilization, the rate of fertilization, and the characterisitics of the fertilized stand. To use this approach, it was necessary to obtain estimates of basal area response. Therefore, each of the five trials was analyzed for basal area for each year following fertilzation by analysis of covariance using initial basal area as a covariate; the covariate was significant at 0.001 in all cases. For the two trials whose controls received initial dressings (N379 and N386) the controls were considered unfertilized; though they actually were fertilized with non-nitrogenous fertilizers it is unlikely that this assumption was deleterious to subsequent analyses for reasons pointed out earlier. Basal area response resulted from this analysis and after discarding obvious outliers, 53 observations of basal area response from the five trials remained. It was decided to estimate two functions -- one if a stand is fertilized at less than age 20 (which is most likely in New Zealand), and another if fertilized after that. The latter used all 53 observations whereas the former used only the 49 observations less than age 44 to estimate the three sub-models.

The first sub-model was the effect of fertilizer on basal area response over time. Graphs of basal area response over time suggested that response increased steadily from fertilization to two years after and then began to level off such that there was no response after four years. A number of functions were examined to describe this trend and it was found that the best equation to model basal area response (G_r) as a function of the years since fertilization (Y_f) was the non-linear form:

$$G_r = Y_f^{b_1} e^{(b_2)Y_f} \tag{10}$$

Equ. 10 has the desirable property of causing the basal area response to equal zero if the when the years since fertilization is equal to zero. Equ. 10 reduced the residual sums of squares by 14.2% for all ages and by 15.5% for the younger fertilized stands. Furthermore, in both cases no pattern was found in graphs of residuals. (Values of coefficients for Equ. 10 are presented with the full model later on.)

The second sub-model of the adjustment was the effect of the rate of fertilization on basal area response. For this sub-model, it was necessary to obtain a functional form that would allow a response to nitrogen alone, or nitrogen and phosphorous, but not phosphorous alone. Graphs of basal area response with fertilizer rate showed that response increased with nitrogen and phosphorous fertilization up to a certain point and then stayed constant with increased fertilization. Of the functions examined, the best form was found to be the non-linear form:

$$G_r = N_f^{b_1} e^{\left(\frac{N_f}{b_2}\right)} e^{\left(\frac{P_f}{b_3}\right)} \tag{11}$$

which also has the desirable property that, when the amount of nitrogen applied is zero, the basal area response is zero. Equ. 11 reduced the residual sums of squares by 17.4% for stands of all ages, and 28.5% for stands less than 44 years of age. Moreover, graphs of residuals showed no pattern.

Using coefficients estimated for Equs. 10 and 11, it was possible to use stepwise multiple linear regression to determine stand variables affecting response. This was done by using an independent variable of the basal area response divided by the product of the result of Equs. 10 and 11. This third sub-model was forced through the origin to constrain it such that if no stand exists, fertilizer response will equal zero. For all observations the model that resulted was:

$$G_r = (Y_f^{b_1} e^{b_2 Y_f})(N^{b_3} e^{\left(\frac{N_f}{b_4}\right)} e^{\left(\frac{P_f}{b_5}\right)})(b_6 A_f + b_7 N) \tag{12}$$

$b_1 = 1.64763$ $\quad b_4 = 145.23484$ $\quad b_6 = 4.63316$

$b_2 = -0.45279$ $\quad b_5 = 601.65597$ $\quad b_7 = 0.00083044$

$b_3 = -0.25167$

b_6 and b_7 significant at 0.000.

$R^2 = 0.842$ $\quad SE_r = 0.39342$ $\quad n = 53$

Of particular interest in Equ. 12 is the sign of coefficients b_6 and b_7. The positive sign of b_6 indicates that response will decrease as the age of fertilization increases (given that the inverse of the age of fertilization is used in the term), and the positive sign for b_7 indicates that response will increase with a higher stocking. Both of these seem in accord with what one might expect biologically.

For observations less than 44 years the model that resulted was:

$$G_r = (Y_f^{b_1} e^{b_2 Y_f})(N_f^{b_3} e^{(\frac{N_f}{b_4})} e^{(\frac{P_f}{b_5})})(b_6(\frac{1}{A_f}) + b_7 G_f + b_8 S) \qquad (13)$$

$b_1 = 1.55561$ $\quad b_4 = 114.78023$ $\quad b_7 = 0.09140$

$b_2 = -0.40438$ $\quad b_5 = 372.94910$ $\quad b_8 = -0.07030$

$b_3 = -0.32043$ $\quad b_6 = 17.62567$

b_6, b_7, and b_8 significant at 0.000.

$R^2 = 0.862$ $\quad SE_r = 0.35414$ $\quad n = 49$

Of note here are the signs of b_6, b_7, and b_8. The positive sign of b_6 again indicates that basal area response decreases with the age of fertilization, the positive sign of b_7 indicates that response increases with basal area, and the negative sign of b_8 indicates that response decreases on better sites. Although the signs of b_6 and b_7 seem in accord with what is to be expected biologically, the negative sign of b_8 possibly seems questionable. However, a good site is presumably not as nutritionally deficient as a poor site. Hence, fertilizer should have a greater effect on a poor site than a good site; the negative sign of b_8 would appear to support this interpretation.

Though the form of the model suggested in Equs. 12

and 13 seemed to fit the data reasonably well -- based not only on regression statistics but also graphical analysis -- and be in accord with biological expectations of stand growth, it still remained to more thoroughly evaluate this model adjustment. As stressed in Chapter 2, derivation of a model is only a first step in model estimation; thorough model evaluation is the next step. Consequently, a thorough evaluation of the model adjustment is presented in the following chapter.

CHAPTER 5

EVALUATION OF THE FERTILIZER ADJUSTED MODEL

In order to evaluate and validate the model adjustment derived in the last chapter, the accuracy, precision, and form of the growth functions of the adjusted model were examined for both unfertilized and fertilized stands in Golden Downs. The data used for this evaluation were data used to derive the original unadjusted model, and the stand remeasurements of the Golden Downs fertilizer trials, which were also the data from which estimates of basal area response used to derive the model adjustment were obtained. The data used for validation were the remeasurement data from P.S.P.s on operationally stands. The statistics used were those presented in the previous chapter which were also used to evaluate the need for model adjustment.

Before proceeding with the evaluation of the adjusted model, it is necessary to clarify the terms "unadjusted" model and "adjusted" model. For unfertilized stands the adjusted model and unadjusted model are identical due to the way the fertilizer adjustment was derived -- i.e. if no nitrogenous fertilizer is applied to a stand, the basal area response will equal zero (see Equs. 12 and 13). Hence, any evaluation of the adjusted model on unfertilized stands is identical to evaluating the unadjusted model. For a fertilized stand, however, the adjusted model will yield a positive basal area response for each of the four years following fertilization. After this point, the growth functions of the unadjusted model are used to grow the fertilized stand to a specified age. Hence, after the direct effect of fertilizer has expired, the unadjusted model will indirectly still be affected by fertilization; the fertilized stand will be grown along a path which unfertilized stands cannot attain. This discussion should therefore eliminate any confusion over what is meant when a reference is made to the adjusted or unadjusted model in subsequent sections and chapters.

I. EVALUATION OF THE MODEL USING THE ORIGINAL DATA SET

To obtain a standard against which to compare other results, the initial evaluation of the model was done using the data originally used to derive the unadjusted model. In this study, these data were "grown" by the model from their initial measurement to each of their subsequent re-measurements. Estimates from the model for top height, basal area, and stocking were compared to actual measurements and residuals were calculated and analyzed using the five statistics presented in the previous chapter; results of this analysis are presented in Table 4 and Fig. 6.

These show that for estimates of top height, the model performs reasonably well even as the prediction period lengthens. Except for a prediction period of one year, mean bias is non-significant throughout, and even the significant bias of one year is of no real concern as it does not appear to persist beyond that point. As the prediction period increases, the precision of estimates remains reasonably

Table 4. Reliability of estimates of growth from the unadjusted model for the original model derivation data.

Per. Len. (yrs)	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.16	0.035	4.455**	1.10	0.17	20.1	168
2	-0.04	0.072	-0.060	1.64	0.29	24.3	106
3	0.21	0.178	1.178	1.54	0.74	24.6	20
4	-0.09	0.221	-0.405	1.79	0.63	32.2	19
5	0.16	0.214	0.747	1.16	0.70	30.1	10
6-7	-0.50	0.612	-0.816	3.11	2.02	30.3	9
8+	-0.29	0.331	-0.864	1.51	0.97	34.1	7
Total	0.07	0.038	1.827	1.63	0.16	23.2	339
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.13	0.046	2.720**	1.40	0.24	20.6	168
2	0.06	0.189	0.326	4.30	0.62	30.1	106
3	0.26	0.649	0.393	5.44	1.57	42.7	20
4	-0.72	0.835	-0.864	6.88	1.40	58.7	19
5	1.76	0.929	1.894	5.77	1.63	55.9	10
6-7	-4.06	2.183	-1.858	12.74	4.49	48.6	9
8+	-2.16	2.327	-0.927	10.70	4.26	54.6	7
Total	-0.04	0.123	-0.358	5.26	0.43	29.5	339
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	1.5	0.74	2.068*	22.2	0.18	401.4	168
2	1.2	3.83	0.326	87.4	0.82	462.7	106
3	2.3	16.30	0.138	136.1	1.69	945.0	20
4	-5.3	12.85	-0.414	104.2	1.73	729.1	19
5	1.2	6.77	0.177	35.6	0.96	715.8	10
6-7	-123.1	110.63	-1.113	579.4	16.90	654.8	9
8+	-31.7	25.84	-1.227	124.2	4.48	576.1	7
Total	-2.9	3.48	-0.833	149.5	0.70	490.6	339

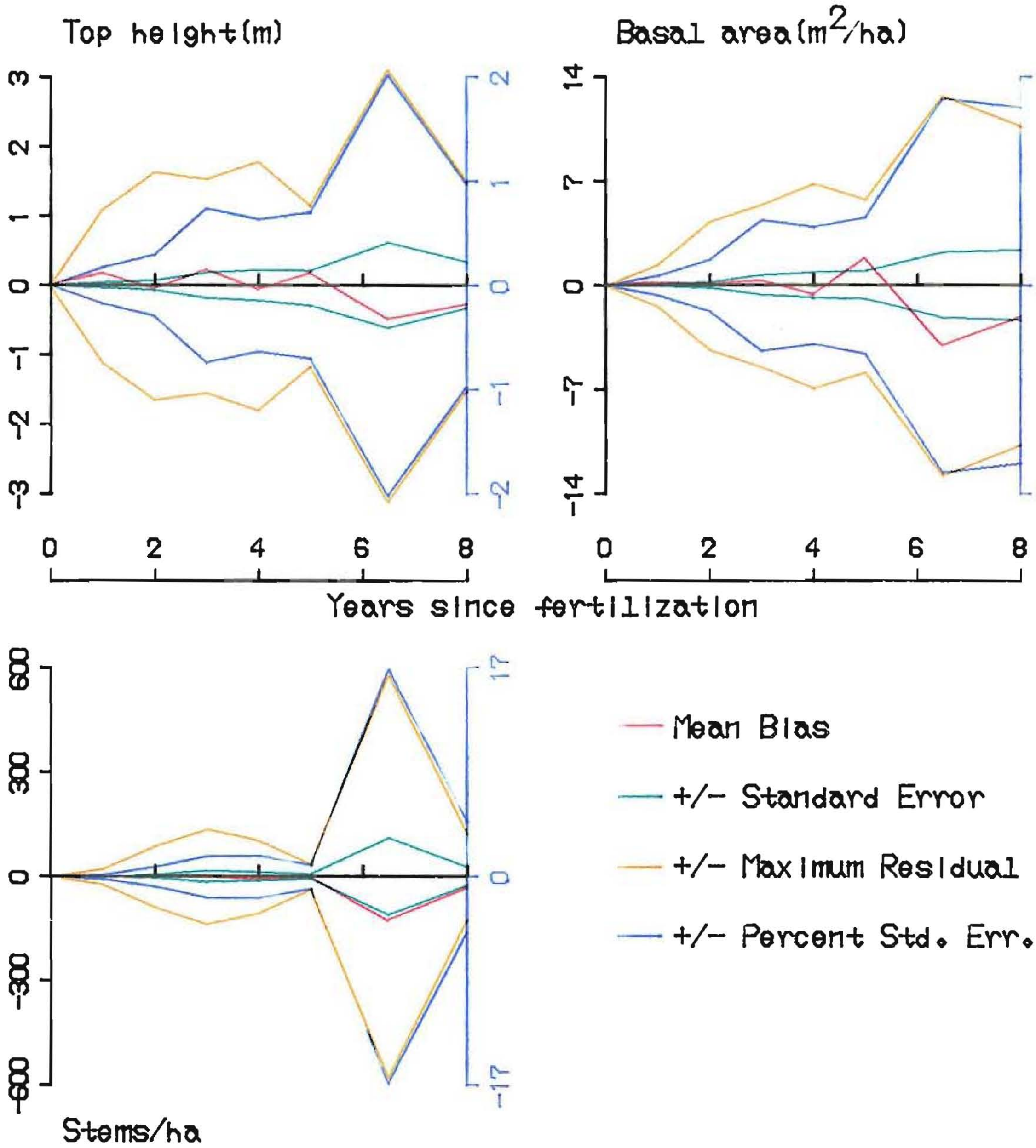


Fig. 6. Graphical depiction of reliability of estimates as presented in Table 4.

good; although the standard errors and percent standard errors show a tendency to increase slightly, the maximum residuals remain relatively constant.

Both basal area and stocking estimates show more of a tendency to deteriorate with prediction period length as is shown by the increase in the magnitude of values for standard error, maximum residual, and percent standard error. However, as with top height, the only point at which mean bias is significant for either is the one year prediction period. Hence, estimates of basal area and stocking from the model may be considered statistically non-biased, but precision of estimates will decrease as the length of the prediction period increases.

The final point to note from Table 4 is that the mean bias for the "Total" for each of the three state variables is not significantly biased. This is indicative that not only will the model generally produce non-biased estimates for any given prediction period length, but will also have no tendency to under- or overestimate consistently any of the three state variables. Hence, the unadjusted model may be considered to produce unbiased estimates of each of the state variables.

II. EVALUATION OF THE MODEL USING FERTILIZER TRIAL DATA

Table 5 and Fig. 7 demonstrate the capability of the adjusted model (Equs. 12 and 13) to estimate basal area of the fertilized stands from the five trials. (Neither top height nor stocking need be evaluated here since they were

Table 5. Reliability of estimates of basal area growth from the adjusted model for fertilized stands in Golden Downs.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
ALL STANDS							
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.15	0.084	1.754	1.26	0.53	15.9	49
2	-0.05	0.210	-0.256	2.36	1.24	17.0	32
3	-0.18	0.183	-0.972	2.65	0.76	24.1	48
4	-0.05	0.239	-0.190	3.03	0.92	25.9	39
5	--	--	--	--	--	--	0
6	0.48	0.273	1.768	0.91	1.85	14.8	3
Total	-0.02	0.088	-0.223	2.61	0.43	20.7	171
STANDS LESS THAN 44 YEARS OLD							
1	0.11	0.078	1.445	1.15	0.53	14.9	48
2	0.07	0.185	0.364	2.00	1.35	13.8	30
3	-0.06	0.175	-0.370	2.43	0.83	21.2	45
4	0.11	0.233	0.482	2.83	1.04	22.4	36
5	--	--	--	--	--	--	0
6	0.48	0.273	1.768	0.91	1.85	14.8	3
Total	0.06	0.082	0.755	2.10	0.45	18.1	162

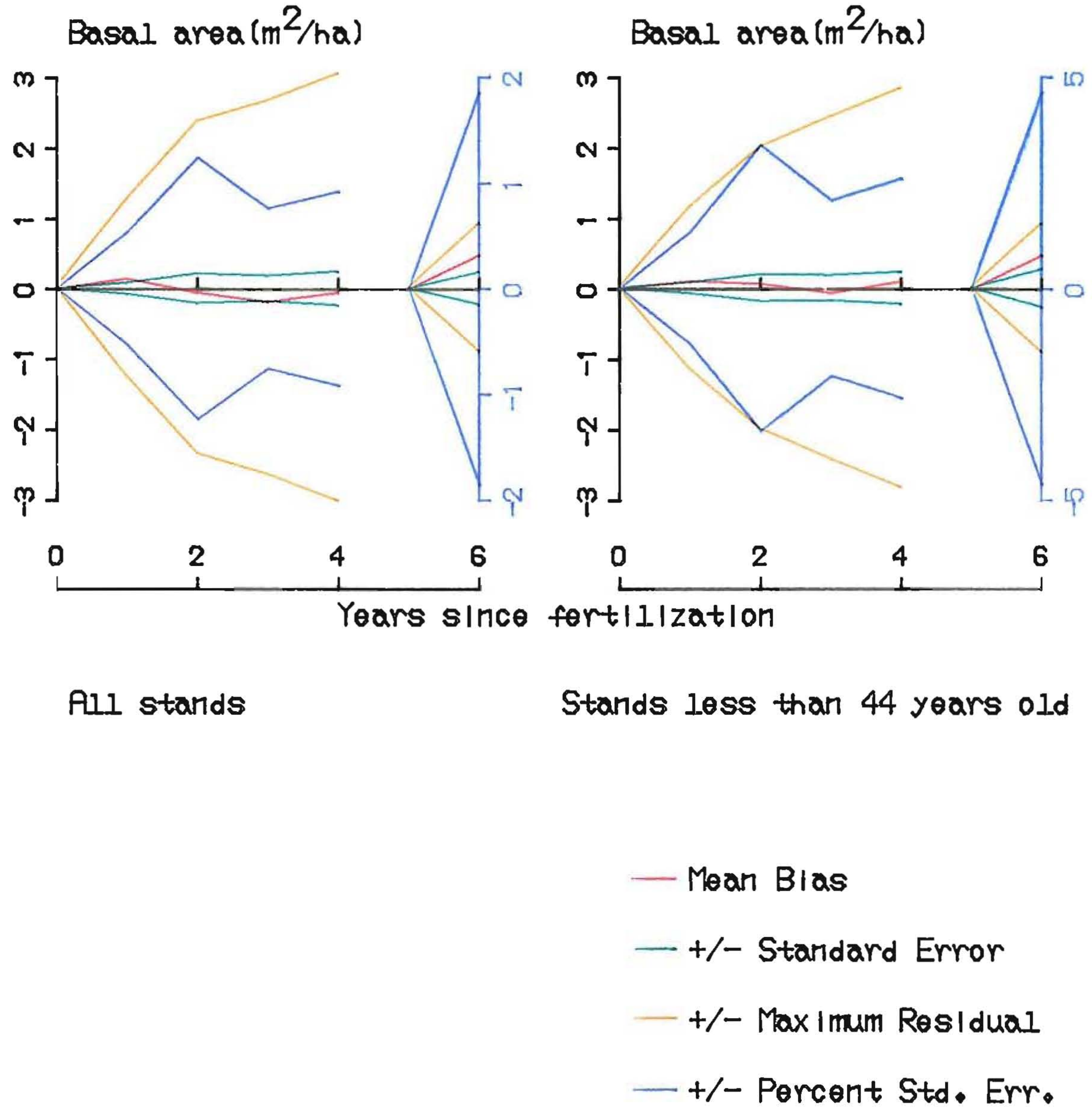


Fig. 7. Graphical depiction of reliability of estimates as presented in Table 5.

not adjusted; the analysis of residuals for top height and stocking for the same measurements as Table 5 and Fig. 7 were presented in Table 3 and Fig. 5.) Table 5 shows that not only is total mean bias non-significant, but also that no significant bias is evident for any number of years following fertilization. It might be argued that because linear regression was used for fitting the adjusted model, total mean bias would equal zero by definition. However, it was not actually assured that estimates for these observations would have a mean bias of zero. This is because the adjusted model was fitted from 53 and 49 observations of basal area response resulting from the analysis of covariance done for each trial; the adjusted model was not fitted directly to the 171 and 162 observations of stand growth of Table 5.

The standard errors, maximum residuals, and percent standard errors in Table 5 may be compared to similar values in Tables 3 and 4 for unfertilized stands to show that the adjusted model not only provides unbiased estimates of basal area for fertilized stands, but also provides estimates approximately as precise as estimates for unfertilized stands; the standard errors and percent standard errors for estimates of basal area for fertilized stands tend to be a bit smaller than for unfertilized stands -- particularly for stands less than 44 years -- but the maximum residuals for for estimates of fertilized stands tend to be a bit higher.

Therefore, from the evidence discussed in the preceding two paragraphs, it may therefore be concluded that Equs. 12 and 13 adjust the model for fertilization such that estimates of growth of fertilized stands are approximately as accurate and precise as estimates for unfertilized stands.

III. VALIDATION OF THE ADJUSTED MODEL

The next step in model evaluation was validation. As explained before, by using observations collected from operationally fertilized stands, it was possible to determine how well the adjusted model will perform on fertilized stands independent of the data used to derive the model adjustment. This is of importance not only to ensure that the model is valid on other stands, but also to determine its effectiveness on operationally (aerially) fertilized stands.

On an aerially fertilized stand, although the actual fertilizer rate on any given point in the stand is likely to be extremely different from the nominal rate of fertilization for the entire stand (Ballard and Will, 1971, Jacks *et al.*, 1972, and others), aerial fertilization is the most commonly used application technique in New Zealand. It would therefore be useful to know how well the adjusted model will cope with the variance of actual (rather than nominal) application rate. Because the validation data presented in Chapter 3 (see Table 2) are from operationally fertilized stands, it may be assumed that each plot of these data received an actual rate of fertilizer different from the nominal rate. Therefore, these data enable an indirect evaluation of how well the adjusted model will perform on operationally fertilized stands, despite the actual fertilizer rate of each plot being unknown.

To validate the model, 18 observations of top height, basal area, and stocking from P.S.P.s were collected from operationally fertilized stands in Golden Downs. (See Table 2 for a summary of the validation data.) Each observation's initial top height, basal area, and stocking were "grown" by the adjusted model to the time of the second measurement using that observation's site index and fertilizer information. The estimates from the model were compared with the actual measurements at the time of the second measurement and residuals were calculated and analyzed. Table 6 and Fig. 8 present the results of this analysis.

What is immediately apparent from Table 6 and Fig. 8 is the significant underestimates of stocking. As was the case with the fertilizer trials, the validation data were all on stands with low stockings such that natural mortality was not likely to occur. Thus, even though the total mean bias is only 3.0 stems, it is highly significant. Because mortality tends to be highly variable in forest stands, and because the results in Table 6 and Fig. 8 for stocking are similar to those presented in Table 3, it is not felt that the significant mean bias for stocking estimates is a serious problem; as suggested before, this bias is simply indicative that the mortality function will overestimate mortality at low stockings.

What is of most importance from Table 6 and Fig. 8 is that neither top height nor basal area estimates show any significant mean bias at any point; this supports the view

Table 6. Reliability of estimates of growth from the adjusted model for independent fertilized stands in Golden Downs.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.11	0.353	-0.323	0.75	1.63	21.7	3
2	-0.17	0.272	-0.608	0.77	1.28	21.2	4
3	0.33	0.177	1.845	0.61	0.75	23.8	3
4	--	--	--	--	--	--	0
5	-0.19	0.188	-1.003	0.58	0.73	26.1	4
6	-0.78	0.348	-2.244	1.51	1.32	26.5	4
Total	-0.22	0.139	-1.561	1.16	0.58	24.0	18
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.01	0.048	0.191	0.09	0.30	15.7	3
2	-0.20	0.293	-0.678	0.83	2.63	11.2	4
3	-0.43	0.335	-1.292	0.94	1.85	18.1	3
4	--	--	--	--	--	--	0
5	0.46	0.689	0.667	1.96	2.98	23.2	4
6	0.19	0.859	0.223	2.29	4.31	19.9	4
Total	0.03	0.242	0.124	1.89	1.37	17.7	18
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	1.7	0.47	3.729	2.8	0.23	203.3	3
2	0.9	0.07	12.665**	1.4	0.05	137.5	4
3	3.9	0.58	6.842*	5.9	0.27	213.3	3
4	--	--	--	--	--	--	0
5	6.6	0.53	12.474**	10.1	0.25	212.5	4
6	1.8	3.13	0.586	8.8	2.09	150.0	4
Total	3.0	0.82	3.673**	8.6	0.45	180.6	18

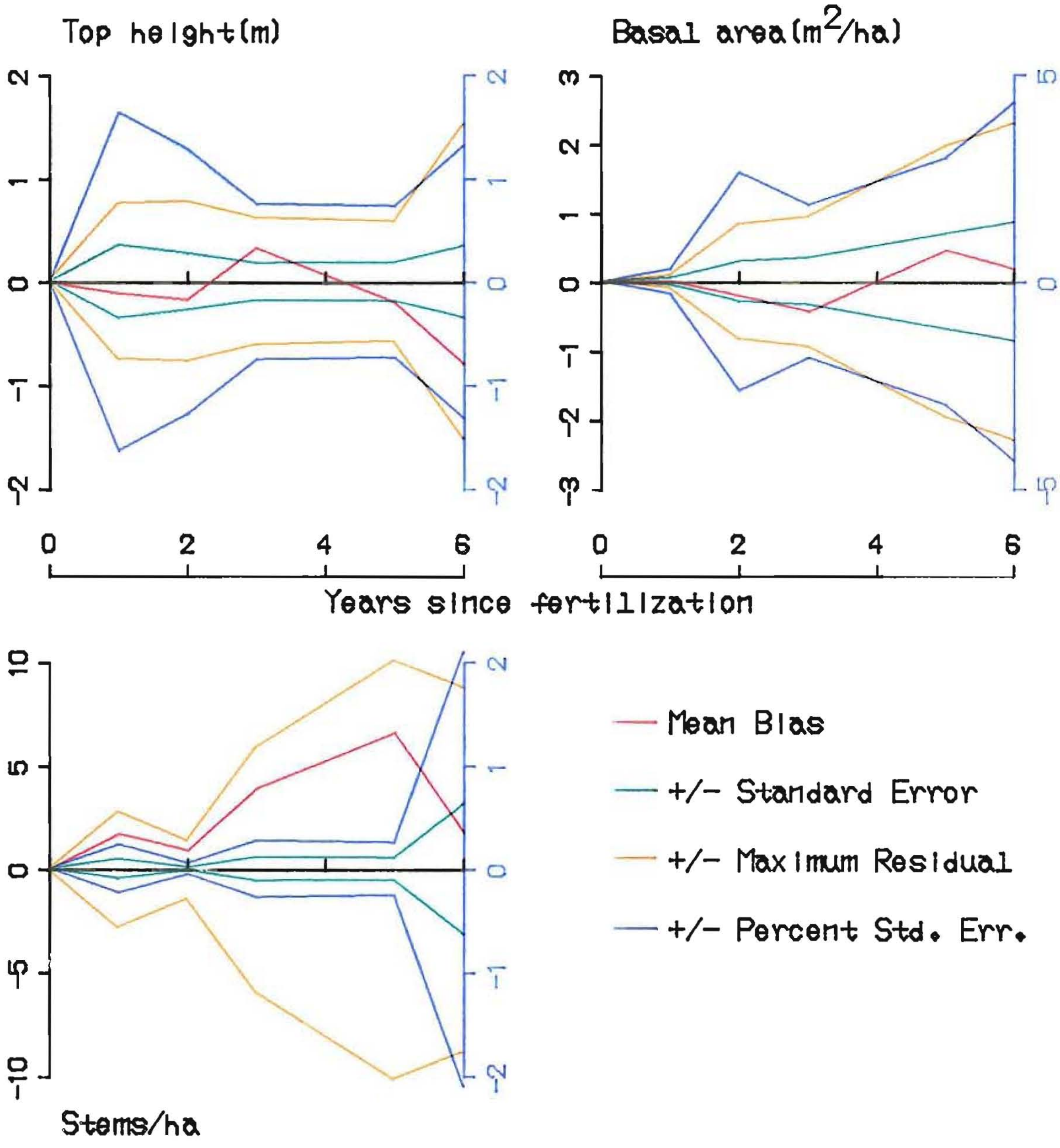


Fig. 8. Graphical depiction of reliability of estimates as presented in Table 6.

that the adjusted model does not have a tendency to consistently under- or overestimate either top height or basal area. This view is further supported by the sign of the mean bias: bias neither becomes consistently positive or negative with an increase in the number of years since fertilization. A further implication of these findings is that even operationally fertilized stands will grow in accordance with adjusted model estimates, despite the probability of highly variable actual application rates of fertilizer.

In addition to estimates of mean bias appearing favourable on the operationally fertilized stands, the precision of estimates of top height and basal area may be said to be approximately the same as similar values from Tables 3, 4, and 5; though standard errors are generally less in Tables 3, 4, and 5 than similar values in Table 6, maximum residuals are generally less in Table 6. This would seem indicative that on stands independent of those used to derive the adjusted model approximately the same precision of estimates for top height and basal area may be expected as for data used to derive the adjusted model. Admittedly, the percent standard errors in Table 6 are generally greater than similar values in the other three tables. However, because the other measure of precision, the maximum residuals, for top height and basal area are considerably less in Table 6 than in Tables 3, 4, and 5, it is felt that the precision of estimates for independent fertilized stands may be considered approximately the same as estimates for the fertilizer trials.

In summary, based on results presented in Table 6 and Fig. 8, it would appear that the adjusted model may be considered "valid". That is, the adjusted model will perform with similar accuracy and precision both for data used to derive the adjustment, and also for data from other fertilized stands. This should give potential users of the model confidence that estimates of top height, basal area, and stocking will be reliable within the limits of accuracy and precision presented in Tables 3 to 6. Moreover, because the observations used for validation were all from operationally fertilized stands, potential users should also have confidence that the adjusted model is valid on operationally fertilized stands despite actual rates of fertilization that are likely to vary greatly from the nominal rate of fertilization at various points in a stand. It would be misleading, however, to suggest that the model will perform this well for all places on all fertilized stands. Rather it is suggested here that the model will perform reasonably well in terms of accuracy and precision for any stand taken as a whole, provided that the fertilizer treatment and conditions of the fertilized stand are roughly within the range of those used in the original data set.

IV. GRAPHICAL ANALYSIS OF THE ADJUSTED MODEL

After validation, it was felt that it would be useful to examine the sensitivity of the model to fertilizer application. In order to examine the change(s) in stand development that the adjustment causes, three hypothetical stands were given four hypothetical amounts of fertilizers and then "grown" by the model to age 36, an age well-beyond the proposed stand rotation age of 25 for radiata pine in Golden Downs; the development over time of the three state variables was then graphed.

Initial stand parameters of the hypothetical stands were determined based on the data originally used to construct both the model and also the fertilizer adjustment. Hence, one stand was fertilized at age six, 1000 stems/ha, 7 m^2/ha basal area, the second fertilized at age ten, 800 stems/ha, 15 m^2/ha area, and the third fertilized at age fourteen, 600 stems/ha, 23 m^2/ha basal area. All stands were site index 26 and the starting top height for each was calculated using the Golden Downs site index equation (Equ. 1). Fertilizer treatments were two levels of nitrogen alone -- 100 kg/ha and 200 kg/ha, and two levels of nitrogen and phosphorous -- 200 kg/ha nitrogen and 100 kg/ha phosphorous, which is often applied to stands in Golden Downs (Gilchrist, D., pers. comm.), and 216 kg/ha nitrogen and 240 kg/ha phosphorous, which was the maximum treatment of any of the fertilizer trials in this study.

Figure 9 shows the top height curve for all stands and all treatments. No change is evident for any treatment or any stand because top height growth in the unadjusted model is not dependent on stand conditions, and top height growth is not adjusted for fertilizer application. Attention is again directed to Fig. 2 which shows the prediction surface for height at various site indices; these are applicable for either unfertilized or fertilized stands.

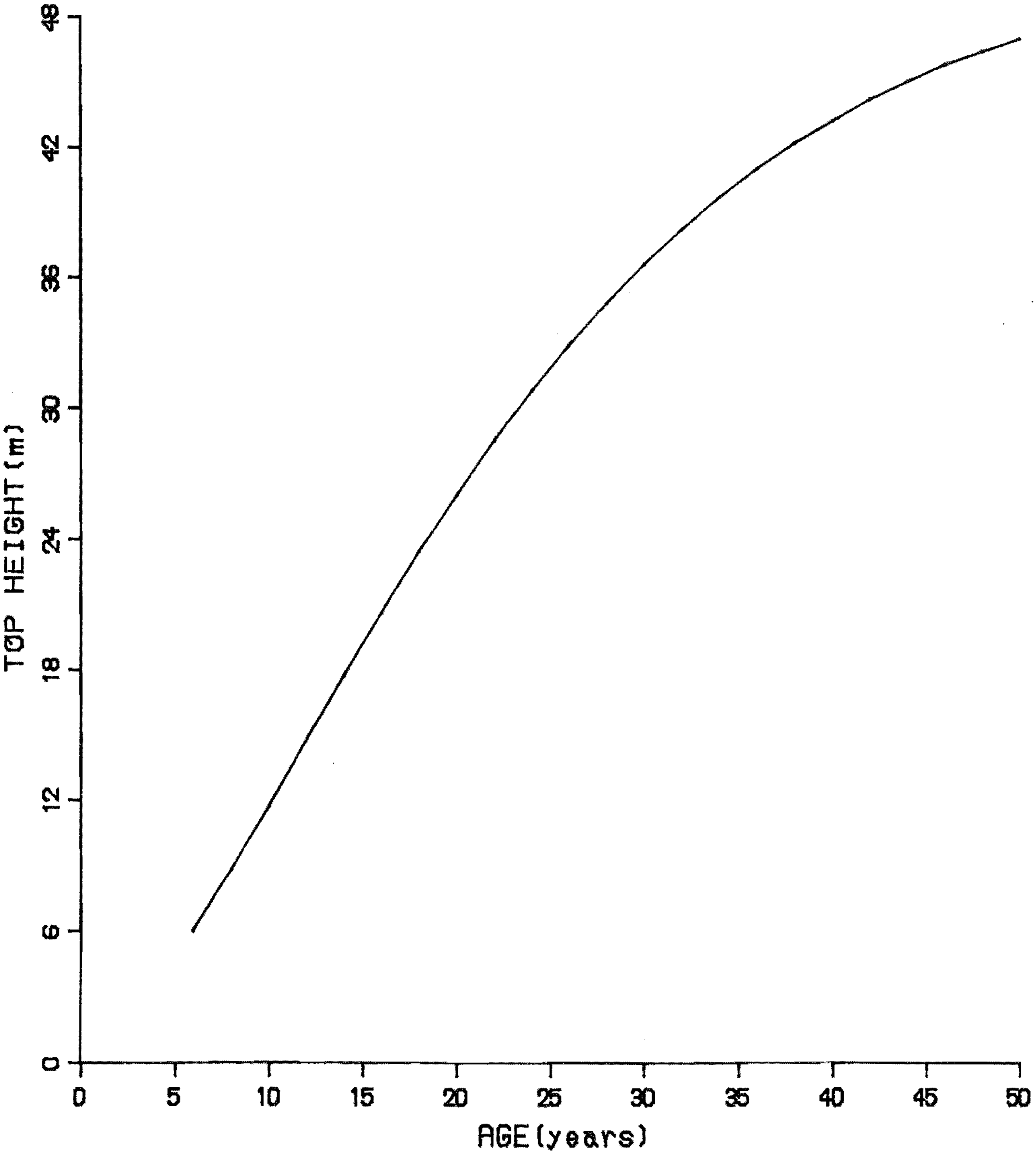


Fig. 9. Top height growth as estimated by the adjusted model.

Figure 10 shows the basal area response of the four treatments on the three stands. This shows that most of the basal area gain four years after fertilization appears to be carried throughout the rotation to age 36 for all stands and treatments. Fig. 10 also shows that the model adjustment reacts as expected; basal area response increases rapidly in the first two years following fertilization and then begins decreasing. Moreover, the basal area response decreases relatively at the higher rates of fertilization: the highest rate of fertilization (which has more than twice the amount of phosphorous than the next highest rate) does not have more than twice the response. Consequently, the rate of response will decrease with increased fertilization, as might be expected; once a nutrient deficiency on a site is overcome it may be expected that additional application of that nutrient will not cause a further postive response.

Fig. 11 shows the development over time of stocking of the three stands. While stocking was not assumed to be directly affected by fertilization in this study, it may well be that fertilization will affect mortality indirectly. It is possible to postulate that fertilization will cause an increased biomass carrying capacity for four years after fertilization. However, at that point the stand can no longer support the increased biomass, and mortality on fertilized stands will then become greater than mortality on unfertilized stands. Fig. 11 shows this trend in stocking for the fertilized stands with heavily fertilized stands showing more mortality than less fertilized or unfertilized stands. Similarly, Fig. 4 shows that mortality is greater

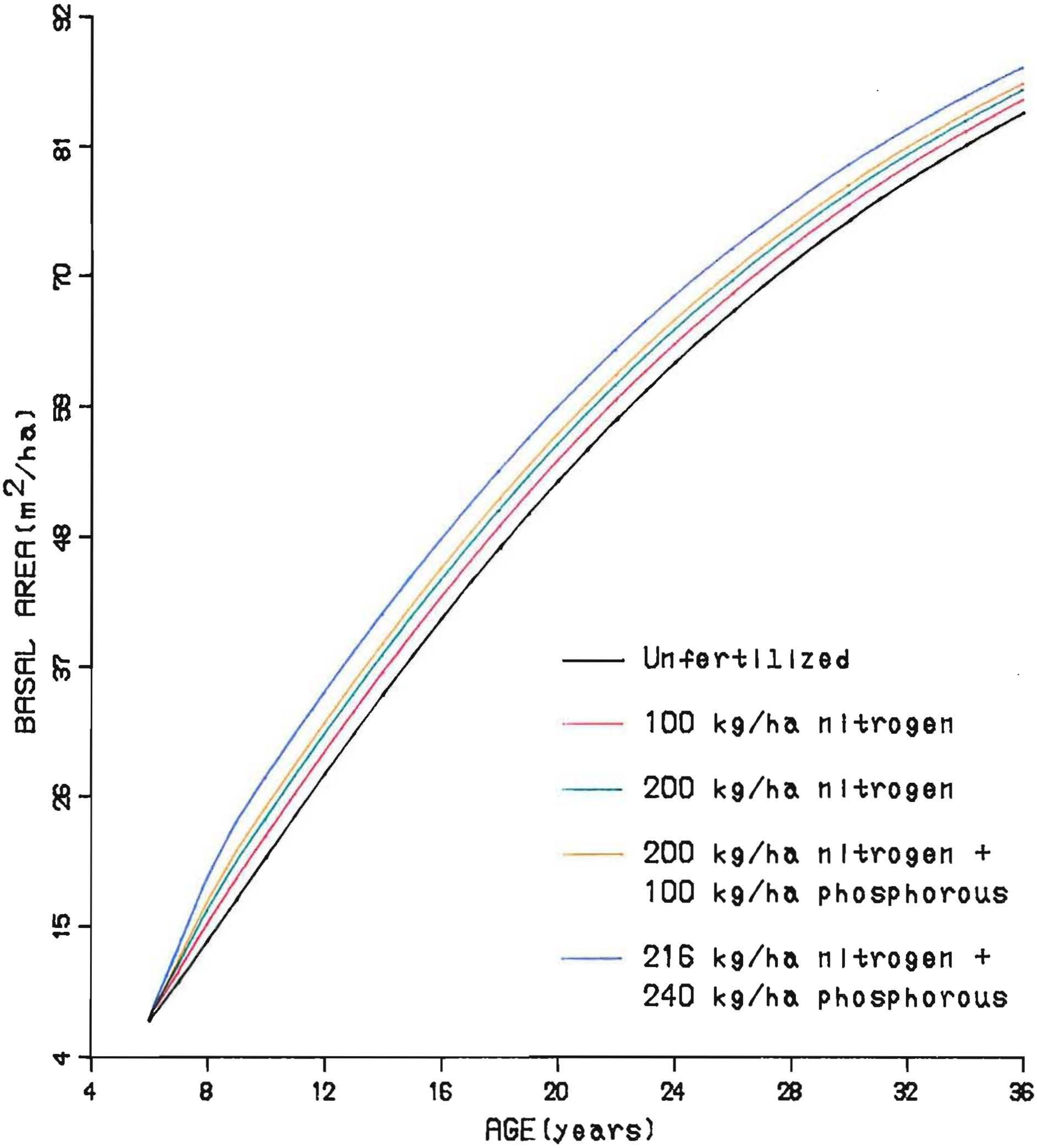


Fig. 10a. Net basal area growth as estimated by the adjusted model of stands fertilized at age 6.

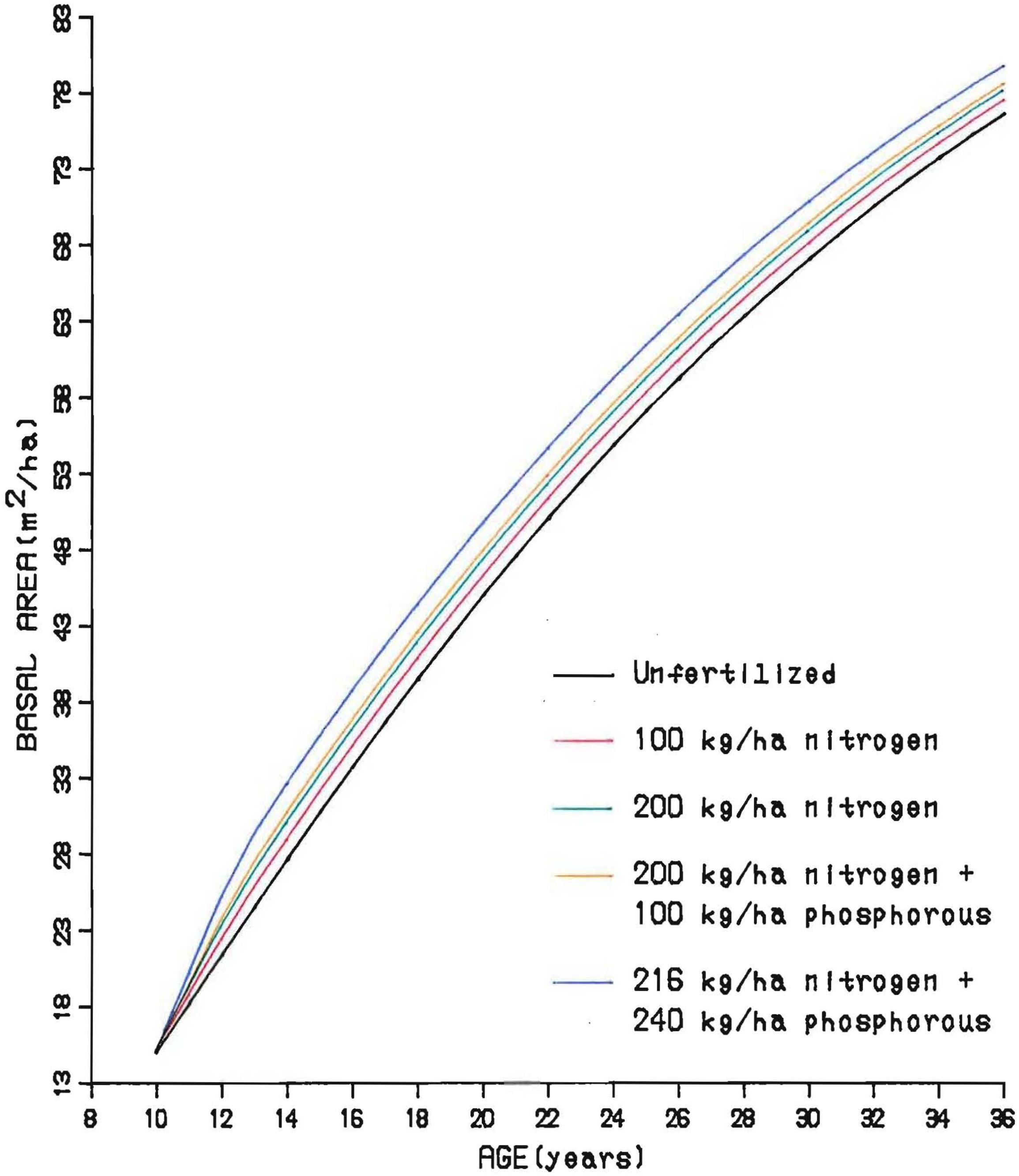


Fig. 10b. Net basal area growth as estimated by the adjusted model of stands fertilized at age 10.

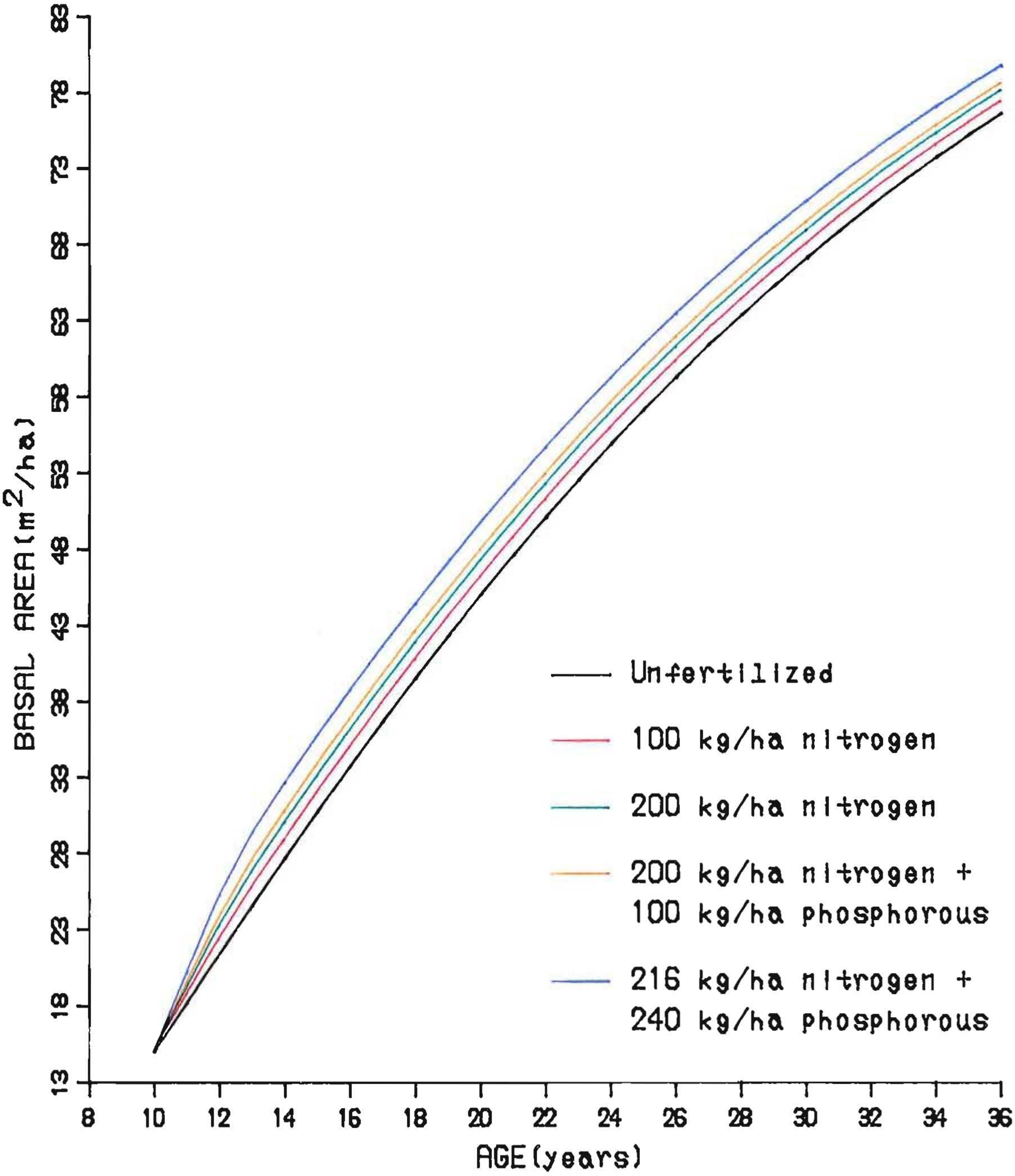


Fig. 10c. Net basal area growth as estimated by the adjusted model of stands fertilized at age 14.

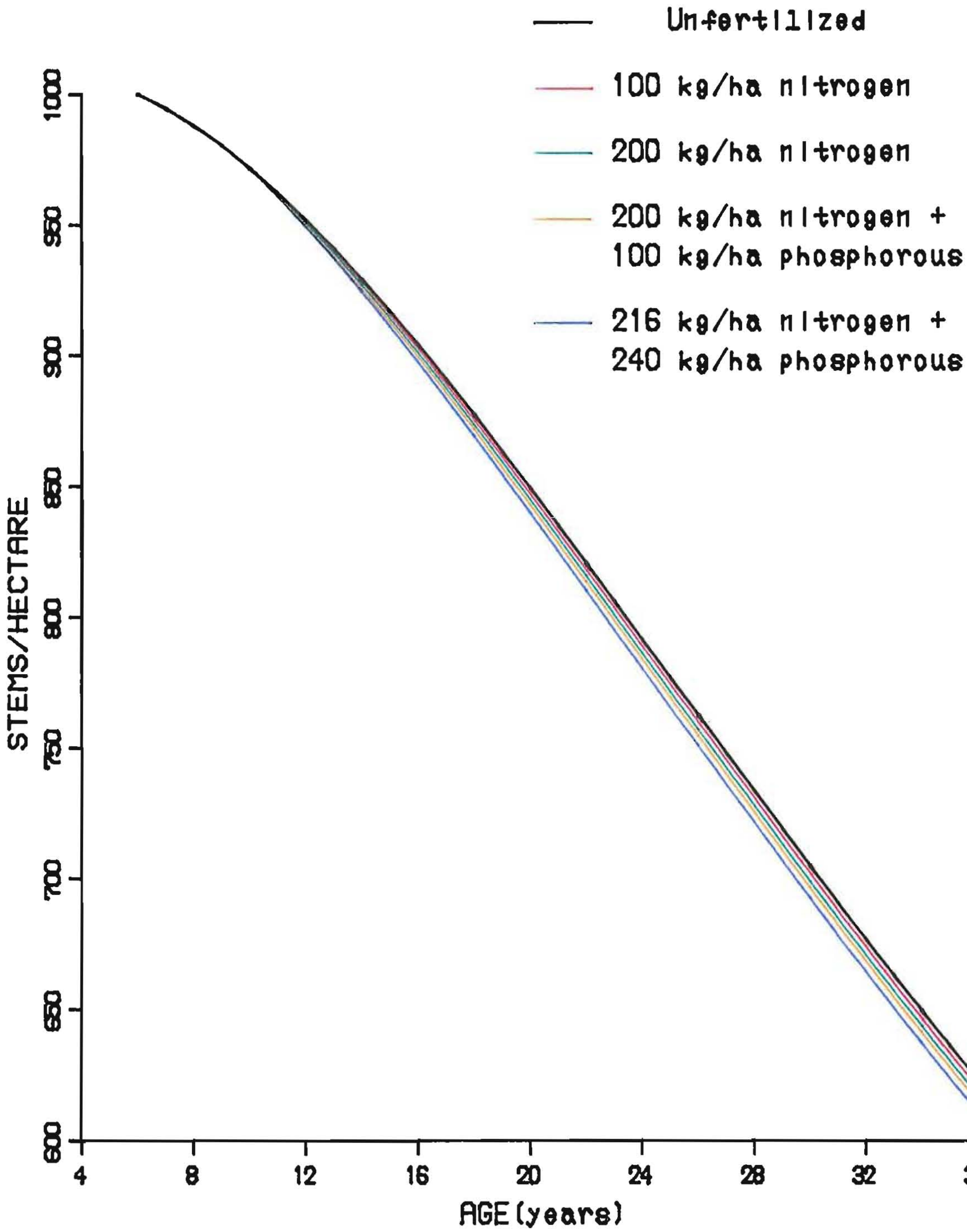


Fig. 11a. Net stocking as estimated by the adjusted model of stands fertilized at age 6.

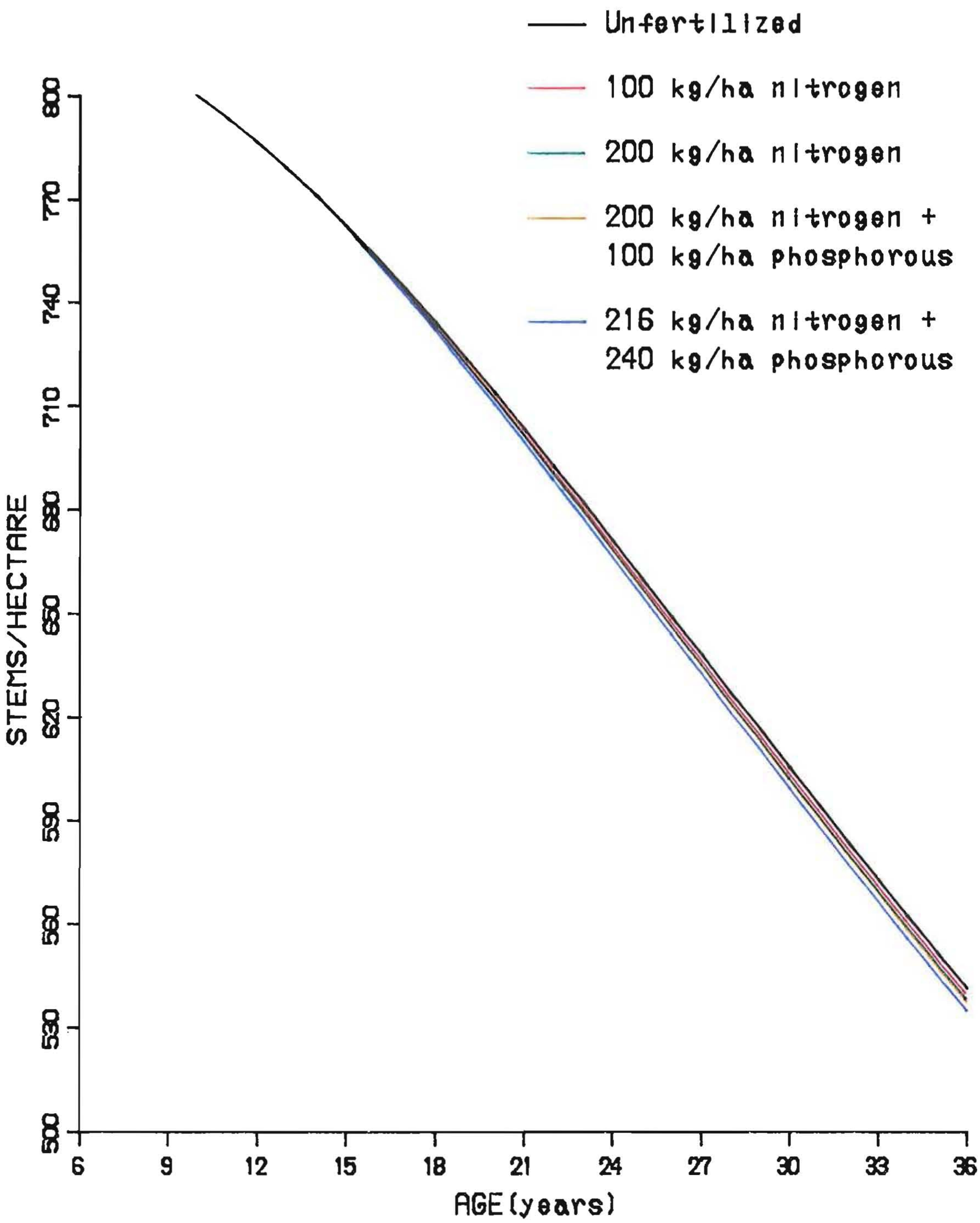


Fig. 11b. Net stocking as estimated by the adjusted model of stands fertilized at age 10.

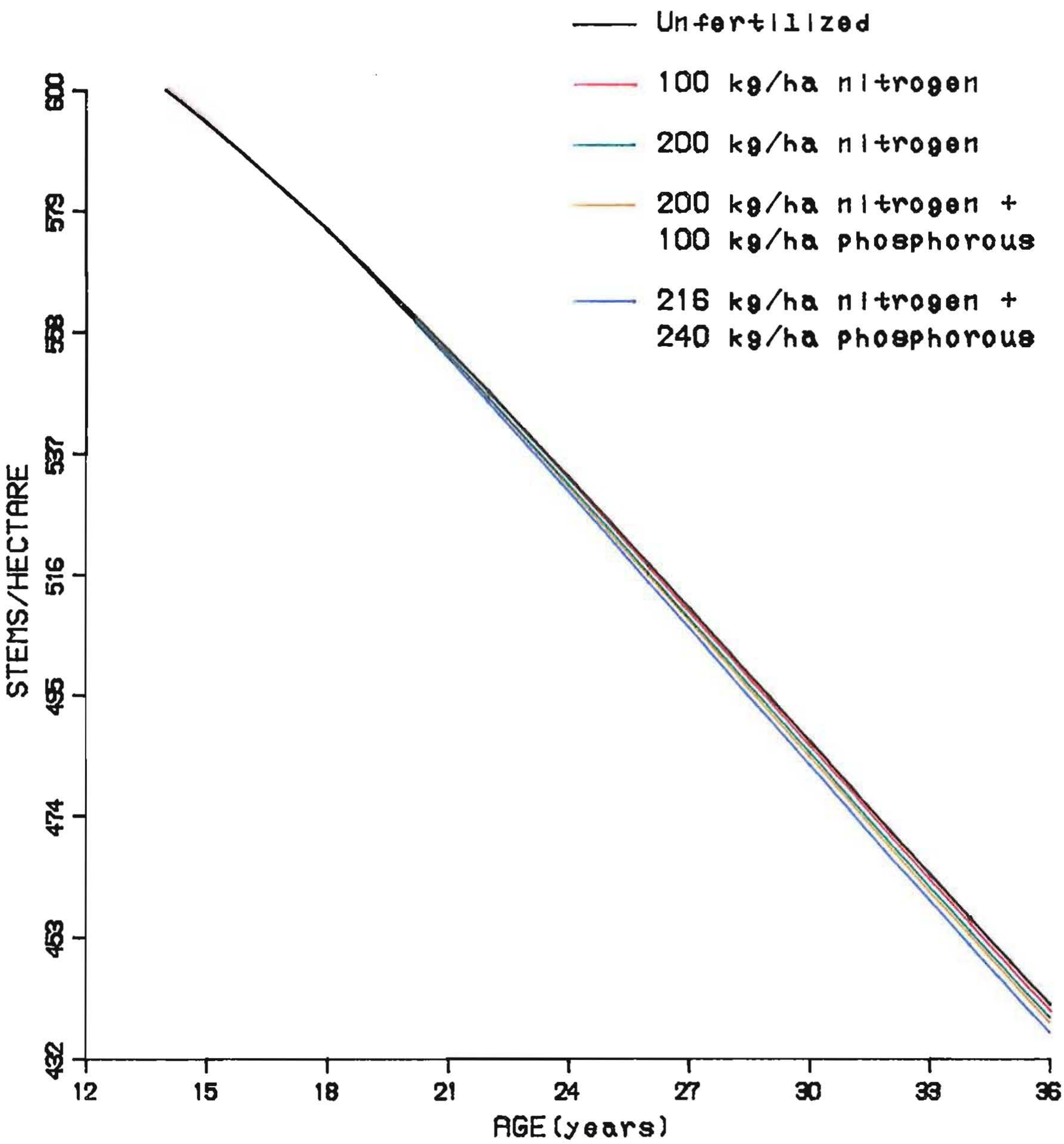


Fig. 11c. Net stocking as estimated by the adjusted model of stands fertilized at age 14.

with a higher site index; this may possibly be explained by assuming that on good sites dominant trees assert their dominance more quickly and completely than on poor sites, thus crowding out and causing the mortality of a greater number of sub-dominants. If this explanation is accepted, fertilizer may improve the site quality (but not site index as explained before) such that a similar phenomenon occurs on fertilized stands. It must be remembered, however, that because of a lack of data on fertilization over the life of a stand both in this study and studies documented in the literature, this response to fertilizer is only conjecture for now.

The preceding discussion summarizes what may be expected from the adjusted model in terms of accuracy, precision, and form of stand development for both unfertilized and fertilized stands for Golden Downs. Ultimately however, a land manager would presumably also like to have reliable estimates of stand volume. As mentioned, fertilizer is likely to affect yield as well as growth. Consequently, the focus of this study will now shift to the estimation of volume for unfertilized and fertilized stands.

CHAPTER 6

METHODOLOGY FOR STAND VOLUME ESTIMATES FOR GOLDEN DOWNS

I. EVALUATION OF VOLUME ESTIMATES FROM FOREST SERVICE P.S.P. METHODOLOGY

As was done before modifying the stand growth functions of the original model to incorporate fertilizer effect, the original volume system of the model must be examined to determine whether or not it too needs modification in order to cope with volume estimation for fertilized stands; the work reviewed in Chapter 2 by Pegg (1966), Miller and Cooper (1973), Woollons and Will (1975), and others suggested that modification would be necessary. Therefore, because the unadjusted model uses a stand volume equation in which volume is a function of stand top height, basal area, and stocking which was fitted from P.S.P. volume estimates, an examination of the P.S.P. volume system is in order.

Details of the P.S.P. system have been explained by McEwen (1978). Briefly, a two-dimensional tree volume equation is used to estimate volumes of trees on a P.S.P. which have had height as well as dbhob measured. From these tree volumes, a volume-basal area regression is fitted and plot basal area and stocking are used with the regression to obtain an estimate of plot volume. These volume estimates may be compared with the true volumes in this study to evaluate the P.S.P. volume system.

As mentioned earlier, true stand volumes were obtained using the 387 sectionally measured trees available in this study from the Golden Downs fertilizer trials (see Chapter 3 and Table 2). Using the assumption that each tree section is the frustum of a cone, the volume of each section was estimated, and the volumes of all sections of a tree were summed to give total stem volume. Each tree was assumed to be the frustum of a cone because Whyte (1971) showed that even if a given section is not conical, errors in volume estimates are likely to be small if the difference between the large-end and small-end diameter is less than 20% of the large end diameter; this was generally the case here. After volumes of trees were estimated, a volume-basal area regression was fitted for all trees on a plot, and plot basal area and stocking were combined with the regression to obtain an estimate of stand volume. This was done for both underbark and overbark volumes for all plots which had trees that had been sectionally measured. Hence, although this volume will be referred to as the "true" volume, it is in reality a "best estimate" of the true volume.

Given these true volumes, the comparison of them with with estimates of volume from the P.S.P. system was undertaken. In fact, Whyte and Mead (1976) did a similar comparison for unfertilized and fertilized stands, and concluded that a regional two-dimensional volume equation (which is essentially what the P.S.P. volume system is) may not adequately quantify volume response caused by fertilization. They concluded that this is largely due to the failure of such a volume equation to account for changes in form caused by fertilization. For this thesis, a comparison was done between volume estimates derived from the P.S.P. volume system and true volumes. Residuals were then calculated and analyzed and the results presented in Table 7. (Statistics used to evaluate volume residuals are the same as those used to evaluate residuals from stand-growth data.)

Table 7. Reliability of underbark volume estimates from the Forest Service P.S.P. methodology for unfertilized and fertilized stands in Golden Downs.

	MB	SEB	t value	Max. Resid.	SE%	Mean Volume	n
	(m^2/ha)			(m^2/ha)		(m^2/ha)	
ALL STANDS							
Unfertilized	4.4	3.36	1.305	45.5	2.64	127.3	42
Fertilized	6.3	3.87	1.636	53.1	1.73	223.4	42
STANDS LESS THAN 44 YEARS OLD							
Unfertilized	2.1	1.86	1.146	24.0	2.66	70.0	39
Fertilized	6.2	2.64	2.344*	35.8	1.54	171.1	39

What is most striking from Table 7 is that the volumes of young fertilized stands have been significantly underestimated. This is possibly due to a change in tree taper caused by fertilization; the tree volume equation at the heart of the P.S.P. system necessarily assumes a certain fixed taper for a tree given the tree's diameter and height, whereas the suggestion that fertilization causes changes in tree taper is well-documented (Meng, 1981, Miller and Cooper, 1973, Snowdon et al., 1981, and others). Though the mean bias is significant for young fertilized stands in Table 7, it is difficult to determine whether precision is better for unfertilized or fertilized stands. Standard errors and maximum residuals are less for unfertilized stands, but percent standard errors are less for fertilized stands.

For all stands it might be argued that, because mean bias is non-significant for fertilized stands, the P.S.P. volume system actually is adequate for both unfertilized and fertilized stands. It must be remembered, however, that "All Stands" contains stands and trees fertilized at age 44. It has been shown that on "fully stocked" older fertilized stands, volume response is greater than basal area response (Whyte and Mead, 1976) whereas the opposite is true for younger stands. Consequently, any shape changes due to fertilizer on younger trees are likely to be very different than changes on older trees. It is suggested here that this difference, and the gap in data from age 20 to age 44 has caused the mean bias to be non-significant for all stands. A more complete data set would likely show that the P.S.P. system is inadequate for older fertilized stands as well.

Regardless of whether or not the P.S.P. volume system is adequate for older stands, it is apparent that it would be worthwhile to examine a volume estimating system that provides unbiased estimates of volumes for both unfertilized and fertilized younger stands. One way of doing this might be a system that has at the heart of it an equation describing tree shape rather than an equation for directly estimating stem volume. Such equations are called taper equations because they describe stem taper. The fact that they do not directly estimate volume is not a limitation for estimating volumes as taper equations may be integrated not only for stem volume, but sectional volumes as well. Consequently, taper equations were examined here for incorporation into a stand volume estimating system in an effort to obtain unbiased estimates of volume for both unfertilized and fertilized stands.

II. UNDERBARK AND OVERBARK TAPER EQUATIONS

(1) Development

Although numerous taper equations have been suggested (Max and Burkhart, 1976, Ormerod, 1973, and others), the equation:

$$\left(\frac{d}{D}\right)^2 = b_1X + b_2X^2 + b_3X^3 + b_4X^4 + b_5X^5 \qquad (14)$$

suggested by Goulding and Murray (1976) for radiata pine may be modified to allow for changes in shape that are reputed to occur as a result of fertilization. The result is an equation that provides nearly unbiased estimates of whole-tree volume and diameter along the length of the stem (Lowell, in prep.). Consequently it was selected for use here.

The taper equation employed uses stepwise mutliple linear regression to select from a number of variables. As a result of applying this procedure, more than one equation is produced; a variable is either included or discarded at each successive step of the procedure resulting in an additional equation at each step. In such an approach, there are a number of problems. First, with a large number of observations, linear regression in general may indicate that a variable is statistically significant, while, in fact, it is of no practical predictive importance; this problem is accentuated with stepwise regression because of the inclusion of variables based on statistical significance. Second, auto-correlation of observations resulting from repeated measurements of the same experimental unit, will cause an underestimate of residual variance with any regression procedure; the result of this problem will also be the possible inclusion of variables with statistical significance but no practical predictive ability. However, despite the auto-correlation present, and a subsequent underestimate of the variance of the residuals, least-squares regression is considered robust enough to produce unbiased coefficient estimates as pointed out in Chapter 2. The implication of these two problems is that statistically significant variables which have no practical significance may enter an equation, but subsequent estimates of coefficients will not be distorted. Consequently, neither R nor the SE may be considered indicative of which equation is actually best at estimating diameter along the entire length of the stem. Therefore, to fit all taper equations throughout this study, only 20% of the measurements recorded on each stem were sampled; the remaining 80% were used to evaluate alternative equations produced by the stepwise procedure. Experience showed that a 20% sub-sample was likely to be adequate in describing the remaining measurements, and using the remaining 80% to evaluate alternative equations helped ensure that only variables with practical predictive ability, rather than statistical significance, were used in an equation. To evaluate alternative equations, each successive equation estimated by the stepwise procedure was evaluated for diameter with the 80% of observations reserved from fitting, and was integrated for stem volume. For both diameter and volume, estimates from the equation were compared to actual measurements and residuals were calculated and analyzed. In this thesis, this analysis is presented only for the equation from the stepwise procedure that best fitted the diameters of the 80% sub-sample and best estimated the volumes of all sectionally measured trees for a given area. Both underbark and overbark taper equations were fitted for all areas.

The underbark equation fitted for Golden Downs was:

$$\left(\frac{dub}{D}\right)^2 = \left(b_1 D + b_2 \left(\frac{1}{Dh}\right)\right) X + b_3 X^2 \ln(h) + b_4 X^3 \ln(h) + b_5 X^4 h + (b_6 \ln(h) + b_7 (Dh)) X^5 \qquad (15)$$

$b_1 = -0.00368$	$b_4 = -0.74536$	$b_6 = 0.52583$
$b_2 = 22.06856$	$b_5 = -0.05655$	$b_7 = 0.00036305$
$b_3 = 0.89266$		

All coefficient's absolute t values were at least 4.345.

$R^2 = 0.983$ $SE_r = 0.08390$ $n = 775$

The functional form of Equ. 15 may be seen graphically in Fig. 13 which is presented and discussed later in this chapter. Although individual coefficients of Equ. 15 are difficult to interpret, the greater the exponent on X, the lower on the stem a term has greatest influence. Hence, the positive signs of b_6 and b_7 indicate that as a tree grows larger as measured by dbhob and tree height, its buttswell becomes more pronounced. Likewise, the negative sign of b_5 indicates that the portion of the stem above the butt and stump decreases proportionately in diameter with an increase in height. Coefficients b_1 to b_4 generally indicate that the upper portion of the stem becomes progressively thinner relatively with an increase in tree size. Though b_3 shows an increase in the upper portion of a stem given its positive coefficient, the log transformation of height in this term shows that the increase is at a decreasing rate with tree size.

The overbark equation fitted was:

$$\left(\frac{dob}{D}\right)^2 = \left(b_1 D + b_2\left(\frac{1}{Dh}\right)\right)X + b_3 X^2 \ln(h) + b_4 X^3 \ln(h) + b_5 X^4 h + (b_6 \ln(h) + b_7 (Dh))X^5 \qquad (16)$$

$b_1 = -0.00420$ $\quad b_4 = -1.08306$ $\quad b_6 = 0.82079$

$b_2 = 27.56830$ $\quad b_5 = -0.06406$ $\quad b_7 = 0.00038467$

$b_3 = 1.10123$

All coefficient's absolute t values were at least 4.643.

$R^2 = 0.988$ $\qquad SE_r = 0.08950$ $\qquad n = 775$

Equ. 16 is of identical form of the underbark equation (15) and the signs of coefficients are also the same. Therefore, no separate interpretation is provided for Equ. 16.

Graphs of residuals for these equations showed that the variance of each line increased at the stump and towards the tip (see Fig. 12 which is presented and discussed in the following section). Several weighting variables were used when fitting Equs. 15 and 16 to try to eliminate or decrease this heteroscedasticity, but none was successful in doing so. Demaerschalk (1973) also tried weightings to remove the heteroscedasticity at the butt end, but he too was equally unsuccessful. It would therefore seem that the heteroscedasticity at the butt tends to be inherent in most taper studies rather than peculiar to this one; this would appear to make sense, since repeated measurements of diameters at the butt end of trees by separate individuals are not likely to be very precise given the convoluted shape of trees where stump "diameters" are generally taken.

From the literature reviewed, however, the heteroscedasticity towards the tip would seem to be peculiar to this study. It is suggested here that this is due to there being fewer measurements recorded in the upper third of stems than towards the stump. (See Table 8 which is presented and discussed in the following section.) The net effect of this is that the stepwise procedure will "weight" the way the line is fitted to give a better fit at the point on the stem where there are most observations; in this case, the butt end. In an attempt to avoid this, the data were re-sampled so that approximately 20% of all observations (rather than 20% of the observations on each stem) were sampled with a more even distribution of observations at each point on the stem; such a scheme samples a greater precentage of observations on large trees where a 4 cm top might be 95% of tree height than on small trees where a 4 cm top might be only 60% of tree height. Underbark and overbark taper equations were fitted to this second sub-sample and evaluated on the remaining observations. Accuracy and precision for diameter from these equations appeared better than for Equs. 15 and 16 at the tip, but worse towards the stump as might be expected. However, when integrated for stem volume, the stem volume estimates from Equs. 15 and 16 were more accurate and precise than stem volume estimates from the equations fitted from this second sub-sample. It is likely that the reason for this is that relatively little volume is in the upper third of the stem. Therefore, if a choice must be made between the two sampling schemes, it would seem better to choose the one providing more accurate and precise diameter estimates of the butt end of a tree than the tip end. Furthermore, additional analysis showed that volume estimates from the integration of the equations fitted from this second sub-sample were not significantly biased for large trees but volumes on small trees were significantly underestimated; this was most likely because of the greater number of observations in the sub-sample from larger trees than smaller trees. Consequently, this secondary sampling scheme was not used here or in the remainder of this study; rather the sampling scheme resulting in the fitting of Equs. 15 and 16 was used.

(2) Evaluation

Equs. 15 and 16 were selected from others produced by the stepwise procedure for their ability to estimate stem diameter as well as their ability to be integrated for stem volume estimates. Table 8 and Fig. 12 show the results of the analysis of residuals which resulted from comparing diameter estimates from Equs. 15 and 16 with the actual measurements for the 80% of observations reserved from fitting procedures; Table 8 also shows the results of the analysis of residuals which resulted from integrating Equs. 15 and 16 for stem volume and comparing these estimates with true stem volumes. Because of the gap in data used to fit

Table 8. Reliability of estimates from the Golden Downs under- and overbark taper equations for diameters along the stem and tree volumes for Golden Downs.

DIAMETER(All trees)

Up. Lim of X	UNDERBARK Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	OVERBARK Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	n Unf	Frt
Stmp	0.28	0.13	0.24	0.14	0.30	0.12	0.33	0.13	138	170
0.1	-0.10	0.09	-0.13	0.07	-0.14	0.08	-0.31	0.06	216	355
0.2	0.14	0.08	-0.00	0.07	0.07	0.08	-0.14	0.07	150	188
0.3	0.05	0.08	0.30	0.09	0.16	0.08	0.36	0.09	139	165
0.4	-0.11	0.08	0.25	0.10	-0.00	0.08	0.31	0.10	146	142
0.5	-0.50	0.12	-0.10	0.10	-0.43	0.12	-0.09	0.09	125	157
0.6	-0.55	0.10	-0.51	0.12	-0.58	0.10	-0.66	0.12	128	152
0.7	-0.54	0.11	-0.27	0.13	-0.72	0.13	-0.48	0.13	99	130
0.8	0.04	0.11	0.37	0.15	-0.15	0.10	0.17	0.14	104	104
0.9	1.23	0.21	1.53	0.19	1.09	0.20	1.44	0.20	67	96
Tip	2.82	0.38	3.93	0.41	2.78	0.35	4.13	0.41	37	37
Totl	0.03	0.04	0.17	0.04	0.00	0.04	0.09	0.04	1349	1696
(Trees less than 48 years old)										
Stmp	0.14	0.12	0.01	0.11	0.17	0.11	0.17	0.12	128	157
0.1	-0.20	0.08	-0.31	0.06	-0.18	0.06	-0.46	0.05	161	297
0.2	0.03	0.06	-0.04	0.06	0.01	0.05	-0.22	0.06	126	168
0.3	0.12	0.07	0.30	0.07	0.20	0.07	0.27	0.07	122	148
0.4	0.04	0.07	0.23	0.10	0.10	0.07	0.24	0.10	131	128
0.5	-0.15	0.09	-0.10	0.10	-0.08	0.08	-0.11	0.10	107	140
0.6	-0.31	0.08	-0.48	0.13	-0.28	0.08	-0.62	0.13	109	132
0.7	-0.35	0.10	-0.49	0.14	-0.37	0.10	-0.65	0.14	76	106
0.8	-0.10	0.10	-0.14	0.12	-0.08	0.10	-0.28	0.12	74	82
0.9	0.31	0.09	0.56	0.14	0.36	0.09	0.52	0.14	39	61
Tip	0.48	0.25	0.90	0.21	0.62	0.23	1.12	0.23	14	12
Totl	-0.05	0.03	-0.08	0.03	-0.02	0.03	-0.15	0.03	1086	1430

VOLUME(All trees)

	MB (m^3)	SEB (m^3)	t value	Max. Resid. (m^3)	SE%	Mean Volume (m^3)	n
UNDERBARK							
Unfert	-0.0078	0.0053	-1.465	0.1585	1.20	0.4418	171
Fertil	0.0149	0.0065	2.273*	0.2235	1.01	0.6455	216
OVERBARK							
Unfert	-0.0106	0.0062	-1.725	0.1852	1.17	0.5254	171
Fertil	0.0111	0.0068	1.629	0.2312	0.89	0.7637	216
(Trees less than 48 years of age)							
UNDERBARK							
Unfert	0.0009	0.0021	0.408	0.0605	1.13	0.1892	156
Fertil	0.0057	0.0029	1.934	0.0966	0.68	0.4344	201
OVERBARK							
Unfert	0.0012	0.0021	0.580	0.0589	0.92	0.2264	156
Fertil	-0.0006	0.0031	-0.184	0.1016	0.61	0.5119	201

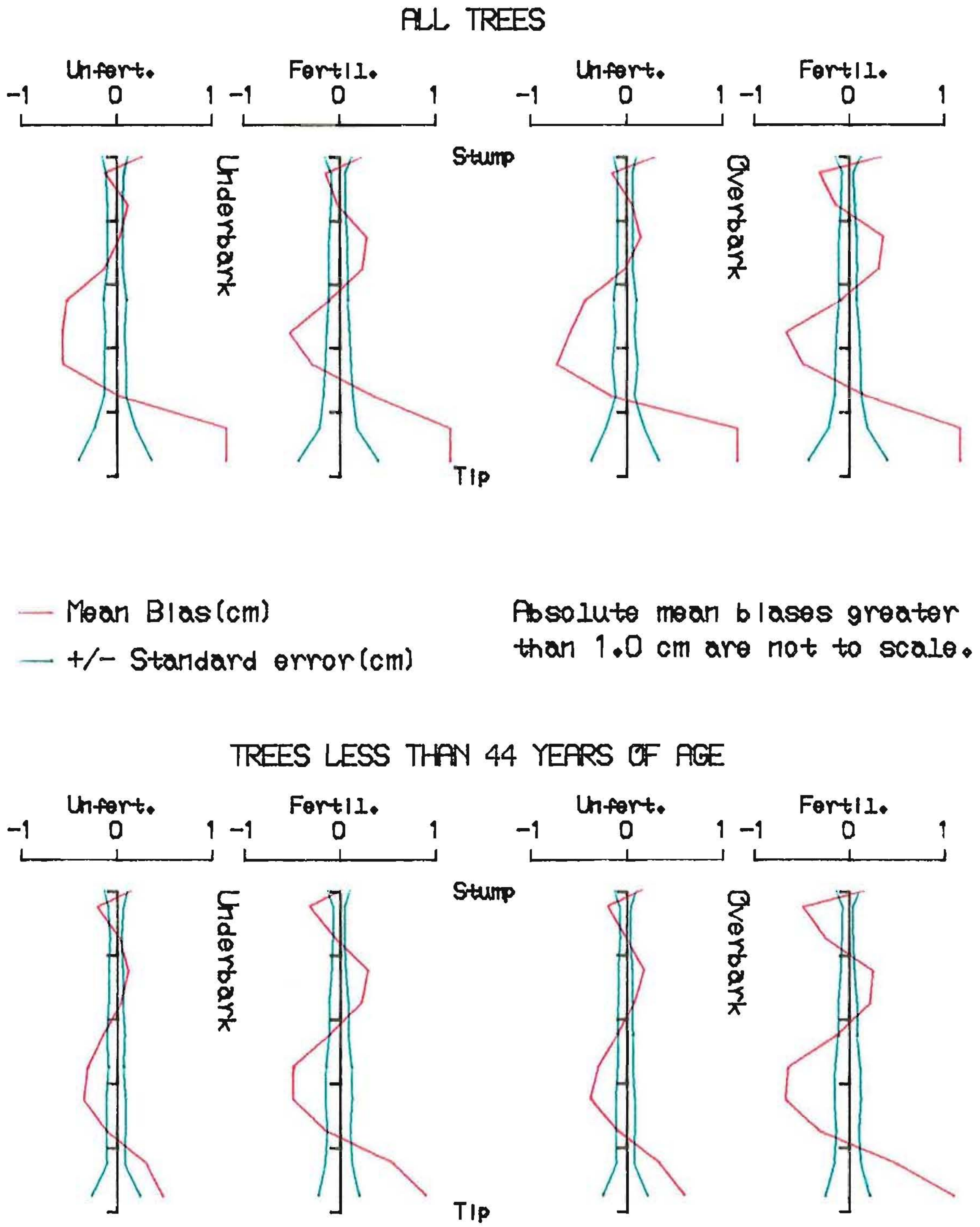


Fig. 12. Graphical depiction of reliability of estimates for diameter as presented in Table 8.

the equations (see Table 2), statistics are presented both for the set of all trees and the subset of trees less than 44 years old.

In all cases (under- and overbark, unfertilized and fertilized), the pattern of mean bias for diameter is remarkably consistent; the stump is underestimated, immediately above stump is overestimated, the next higher 20% is underestimated, 30% to 40% above this is overestimated, and the very upper portions of the stem are underestimated. This is extremely pronounced for all trees but also evident to a lesser extent for trees less than 44 years of age. The only portion on the stem where bias might be considered large enough to be of concern is at the tip end. It was pointed out, however, that this is likely because of relatively few observations in this region for fitting. Furthermore, this bias is actually of limited concern since there is very little volume in the region of the stem where this bias is most extreme.

The actual magnitude, as distinct from the pattern, of bias for diameter at any point along unfertilized or fertilized stems is similar for both, although unfertilized trees consistently have less total bias. Furthermore, there is less bias for diameter in the subset of young trees than for all trees. The same may also be said of the standard errors for diameter. This is most likely not a flaw in Equs. 15 and 16 but yet another indication that larger biological experimental units will have more variance than smaller units.

Table 8 shows that these equations also perform reasonably well when integrated for stem volume. The only case where bias for volume is statistically significant is underbark volume for all fertilized trees. These equations also give reasonably precise estimates of tree volume; the percent standard errors are generally within 1% of the mean volumes. The significant bias mentioned is most likely not of great importance; Whyte and Mead (1976) suggested that fertilization at older ages causes volume increases mainly above breast height whereas Snowdon et al. (1981) showed that fertilization at younger ages will also cause a basal area response. As suggested earlier in this chapter, the volume bias in Table 8 most likely indicates a failure of Equ. 15 to handle an upper stem diameter increase with little or no breast height increase as might occur when stands are fertilized at older ages. However, it is unlikely from a practical standpoint that stands will be fertilized at age 44 in Golden Downs so this should not be considered a major limitation of Equ. 15.

It is noted here that the difference between mean volume of unfertilized and fertilized trees in Table 8 (and subsequent tables as well for both tree and stand volumes) cannot be taken as the response of individual trees to fertilizer. Due to sampling procedures for sectionally measured trees, all trees measured at the start of a trial, when trees were relatively young and small, were unfertilized whereas four years later, when trees were older and larger, most would be classified as fertilized. Hence, the difference in mean volumes between unfertilized and fertilized stand volume was caused by the sampling procedure and not by fertilizer response. Furthermore, not all trees were sectionally measured on each plot of each fertilizer trial making a direct comparison of individual tree volumes meaningless.

III. DIAMETER DISTRIBUTION EQUATIONS

Once taper equations capable of describing stem profiles and capable of being integrated to estimate tree volume were available, it was necessary develop methodology that would allow expansion of tree volumes to stand volumes. For this purpose, if the diameter distribution of a stand is known or can be estimated, it is possible, using taper equations 15 or 16, to estimate the volume of each class in the diameter distribution and sum the volumes of all classes to arrive at an estimate of underbark or overbark stand volume. For this study, it was decided to use a Weibull function to describe the diameter distribution of a stand; a Weibull function has been used satisfactorily for this purpose by others (e.g. Ek, et al., 1975, Goulding and Shirley, 1978). Moreover, Garcia (1981b) explained how a diameter distribution may be estimated using the minimum diameter, the mean diameter, and the variance of the diameter distribution to solve for the three Weibull coefficients (location, scale, and shape). Therefore, equations to produce estimates of minimum dbhob, mean dbhob, and the variance of distributions of dbhob were necessary.

Data to fit the appropriate equations came from the yearly measurements of plots of the fertilizer trials which resulted in a total of 305 observations. For each plot, the minimum dbhob (Dmin), the mean dbhob (Dmean), and variance of the dbhob distribution (Dvar) were obtained and equations fitted from these values using stepwise multiple linear regression. In fitting these equations, a major concern was obtaining equations that "made sense" -- i.e. no estimates less than zero were produced for any of the quantities and when basal area and stocking were zero, each of the three quantities were either zero or undefined. Ensuring that variance was non-negative was particularly difficult; the equation selected for use for variance was selected from a number of equations primarily because it will always produce positive estimates of variance.

The three equations fitted were:

$$Dmin = b_1\left(\frac{1}{N}\right) + b_2\left(\frac{G}{N}\right) + b_3\left(\frac{N}{G}\right) \tag{17}$$

$b_1 = 5545.80160 \qquad b_2 = 75.54799 \qquad b_3 = -24.45418$

$R^2 = 0.978 \qquad SE_r = 2.962$ cm

$$Dmean = b_1 \ln(G) + b_2 N + b_3\left(\frac{G}{N}\right) + b_4\left(\frac{1}{N}\right) + b_5 A_p + b_6\left(\frac{N}{G}\right) \tag{18}$$

$b_1 = 6.18303 \qquad b_3 = 143.61035 \qquad b_5 = -0.15143$

$b_2 = -0.00562 \qquad b_4 = 1350.37138 \qquad b_6 = 0.01261$

$R^2 = 0.999 \qquad SE_r = 0.758$ cm

$$Dvar = G(b_0 + b_1 A_f) \tag{19}$$

$b_0 = 0.04767 \qquad b_1 = 0.03924$

$R^2 = 0.632 \qquad SE_r = 0.30899\ cm^2$

All absolute t values of coefficients of (17) to (19) were at least 4.864. n = 305 for (17) to (19)

Graphs of residuals for Equs. 17 to 19 were also examined and no pattern was apparent for any of the three equations.

Although no fertilizer variables are present in these equations, the effect of fertilizer on the diameter distribution will be accounted for indirectly. It has already been shown that fertilizer causes a definite effect on basal area. Therefore, as basal area increases, the mean dbhob, variance of the dbhob distribution, and presumably minimum dbhob will increase as well.

Equs. 17 to 19 were not selected for use based on their coefficients of determination or standard errors of regression. Due to the data being from repeated measurements of the same stand and the likely resultant autocorrelation, it was felt that coefficients of determination and standard errors of regression were of limited use in evaluating successive equations produced by the stepwise procedure. Successive equations produced by the stepwise procedure were evaluated using Equs. 15 and 16 and Equ. 20 to estimate stand volume; Equ. 20 is presented and discussed in the following section. To evaluate each diameter distribution equation produced by the stepwise procedure, the following methodology was adopted.

After one iteration of the stepwise procedure one variable would have entered the equation for each quantity. These single-variable equations were used to estimate a diameter distribution using a Weibull function; this distribution was then used with Equs. 15, 16, and 20 to estimate underbark and overbark stand volume. These volumes were then compared to the true volumes and residuals calculated and analyzed. As the second step, the two-variable equation for Dmean resulting from the second iteration of the stepwise procedure was used in place of the single-variable equation with a Weibull function and Equs. 15, 16, and 20 to again estimate underbark and overbark volume. These were again compared to the true volumes and residuals calculated and analyzed. If the two-variable equation improved accuracy or precision of volume estimates compared to volume estimates using the single-variable equation, the three-variable equation produced by the third iteration of the stepwise procedure was examined the same way; if the two-variable equation had not improved the accuracy or precision of the volume estimates, the single-variable equation would have been selected for use and the same procedure was then carried out for Dmin, and then Dvar. This procedure continued for each equation until either no improvement in volume estimates resulted from an additional variable added to an equation, or until all variables that had entered an equation had been examined. This iterative evaluation procedure appeared to be virtually the only way to evaluate successive equations estimated by the stepwise procedure to ensure that only variables with practical predictive ability -- as opposed to statistical significance -- were used in an equation.

IV. TREE HEIGHT EQUATION

After selecting Equs. 17 to 19 for use, it was possible to generate a diameter distribution using a Weibull function for any given stand; such distributions were generated by one cm classes in this study. If an estimate of tree height is available for a tree of mean diameter for a given class, the taper equations developed (15 and 16) may then be used for any diameter class to obtain average volume per tree of that class. This volume estimate may then be multiplied by the number of trees in that class to obtain a class volume estimate, and then all class volume estimates of a stand may be summed to give a stand volume estimate. Therefore, in this study a function to estimate tree height was required.

Typically, tree height is estimated as a function of diameter and possibly age. However, in this study it has already been shown that diameter is affected by fertilization while height is not. Therefore, it is inappropriate to estimate height as a function of diameter here. Instead, relative diameter was used. Using Equs. 17 to 19, diameter distributions were generated for each plot on which sectional measurements had been done. The relative position in the diameter distribution (i.e. the percent of trees in the distribution smaller than a given tree) was calculated for each sectionally measured tree. (This relative diameter variable will henceforth be known as "RelD".) RelD was then used to produce the tree height equation:

$$h = H(b_0 + b_1 \ln(\mathrm{RelD}+1)) \qquad (20)$$

$b_0 = 0.83744$ $\qquad$ $b_1 = 0.28862$

$R^2 = 0.369$ $\qquad$ $SE_r = 0.08770$ $\qquad$ $n = 387$

Both coefficient's t values were at least 15.058.

Equ. 20 produces estimates of tree height which are unaffected by actual diameter and therefore will not estimate tree height of fertilized trees to be different than tree height of unfertilized trees given the same top height and position in the diameter distribution.

Due to the iterative evaluation procedure used for the diameter distribution equations (17 to 19) that was explained in the last section, RelD for each tree was recalculated for each successive diameter distribution equation examined and an equation of the form of Equ. 20 refitted; Equ. 20 is the height equation resulting when RelD was calculated from Equs. 17 to 19.

Because neither the coefficient of determination nor the standard error of the regression are of particular value in evaluating Equ. 20, an analysis of residuals was done using the same trees used to fit Equ. 20. The same measurements were used in this case for both equation fitting and equation evaluation because no independent measurements were available. Table 9 presents the results of this analysis.

Table 9. Reliability of estimates from the Golden Downs tree height equation for trees in Golden Downs.

	MB (m)	SEB (m)	t value	Max. Resid. (m)	SE%	Mean Height (m)	n
ALL TREES							
Unfertilized	-0.08	0.109	-0.713	3.26	0.72	15.15	171
Fertilized	0.11	0.108	0.970	3.66	0.56	19.40	216
TREES LESS THAN 44 YEARS OLD							
Unfertilized	-0.08	0.094	-0.821	2.67	0.75	12.60	156
Fertilized	0.14	0.108	1.254	3.54	0.61	17.65	201

Table 9 shows that Equ. 20 will estimate heights of unfertilized trees approximately as well as heights of fertilized trees. Moreover, estimates for neither are significantly biased, and standard errors are approximately equal though percent standard error favors estimates of heights of fertilized trees. However, maximum residual values favor estimates of heights of unfertilized trees. Thus, Equ. 20 was considered adequate for use here.

V. EVALUATION OF THE STAND VOLUME ESTIMATING SYSTEM

Using Equs. 15 to 20, an estimate of volume for any stand may be obtained by generating a diameter distribution using a Weibull function, calculating the volume of the mean tree for each class using the taper equations integrated for stem volume and the tree height equation, multiplying that volume by the number of trees in that diameter class to obtain class volume, and summing the volumes of all the classes to obtain an estimate of stand volume. This was done for both under- and overbark stand volume and resulting estimates were compared to the true stand volumes; residuals were then calculated and analyzed. Table 10 presents the results of this analysis.

Before discussing Table 10, it is noted that the same procedure for estimating stand volume that was explained in the previous chapter may be followed for volume to any merchantable limit by integrating Equ. 15 and/or 16 to a fixed height or iteratively solving for height to a certain diameter and then integrating to that height for estimates of tree volume to a given merchantability limit. This was not done here, however, because of a lack of sectional measurements at fixed heights or diameters.

Table 10. Reliability of estimates from the Golden Downs volume system for unfertilized and fertilized stands in Golden Downs.

	MB (m^2/ha)	SEB	t value	Max. Resid. (m^2/ha)	SE%	Mean Volume (m^2/ha)	n
ALL STANDS							
		Underbark volume					
Unfertilized	-1.73	2.06	-0.839	27.52	1.62	127.3	42
Fertilized	2.55	2.74	0.930	36.75	1.23	223.4	42
		Overbark volume					
Unfertilized	-1.93	2.29	-0.841	30.69	1.51	152.2	42
Fertilized	0.21	2.76	-0.445	36.67	1.05	264.0	42
STANDS LESS THAN 44 YEARS OF AGE							
		Underbark volume					
Unfertilized	0.17	1.50	0.116	18.97	2.14	70.0	39
Fertilized	2.62	1.81	1.444	23.62	1.06	171.1	39
		Overbark volume					
Unfertilized	0.57	1.57	0.361	19.94	1.87	84.0	39
Fertilized	0.28	1.67	0.165	21.15	0.83	201.6	39

Table 10 shows that this method of estimating volume is about equally applicable to both unfertilized and fertilized stands. Notably, mean bias is non-significant in either type of stand which was a major goal of this type of volume estimating system. Standard errors and maximum residuals are lower for fertilized stands for both underbark and overbark volume for all stands, but are higher for unfertilized stands for the subset of stands less than 44 years old; percent standard error is better for fertilized stands in all cases. Notably, the single-tree volume bias evident in Table 8 is also generally evident in stand volume estimates: in both tables volumes are overestimated for the unfertilized condition, volumes are underestimated for the fertilized condition, and for the subset of data less than

44 years of age, estimates of volumes for the fertilized condition have much more bias than unfertilized volumes.

Comparing values in Table 10 with similar values in Table 7 makes it apparent that the volume system developed is an improvement over the P.S.P system. Not only have Equs. 15 to 20 decreased mean bias and eliminated the significant bias, but they have also improved the precision of estimates of volume: standard errors, percent standard errors, and maximum residuals in Table 10 are approximately two-thirds of similar values from Table 7 for both unfertilized and fertilized stands. Clearly, the volume estimating system developed has achieved the goals of relatively accurate and precise estimates of volume for unfertilized and fertilized stands.

VI. GRAPHICAL ANALYSIS OF VOLUME RESPONSE TO FERTILIZER

After revising the volume estimating system, it was felt that it would be appropriate to examine the response of volume to fertilizer as the final section in this chapter. This could be done on two levels in this study: (1) tree volume and (2) stand volume. For each, the hypothetical stands examined at the end of Chapter 5 in Figs. 9 to 11 were given the same hypothetical treatments. To examine tree volume, the underbark profile of the mean tree from each stand four years after fertilization (when response is maximum) was graphed. Then, each tree's profile was integrated to yield an estimate of underbark tree volume. To examine stand volume, graphs similar to Figs. 9 to 11 were made.

Fig. 13 shows the stem profiles of the mean trees for the four stands under all treatments. It is apparent from Figure 13 that the effect of fertilization on the tree is an increase in taper -- i.e. the most response is near the stump and response decreases higher up. For all hypothetical stands examined, the difference in response at breast height between an unfertilized tree and a tree from a stand given the maximum treatment is approximately 2 cm. The tree volume estimates resulting from the integration of the equation for each stem profile are presented in Table 11; Table 11 also shows the trend of volume increase with low fertilizer rates and a diminishing increase with higher rates.

Fig. 14 shows stand volume over time for the three stands with the four treatments. In natural stands, net volume over time is usually assumed to develop as a sigmoid curve; the adjusted model and volume estimating system would appear to conform to this trend as is clearly shown in Fig. 14a. Fig. 14 would also seem to show that the fertilizer-induced increase in volume four years after fertilization is maintained through the life of a stand. It is noted, however, that this is purely conjecture since there were no actual data for the entire life of a stand available to this study. Fig. 14 also shows that the difference in volume at age 36 between the unfertilized stands and the stands given the maximum treatment of 216 kg/ha nitrogen and 240 kg/ha phosphorous was approximately 4% for the relatively dense stand fertilized at age 6 and about 10% for the less dense stand fertilized at age 18. However, it is again noted that

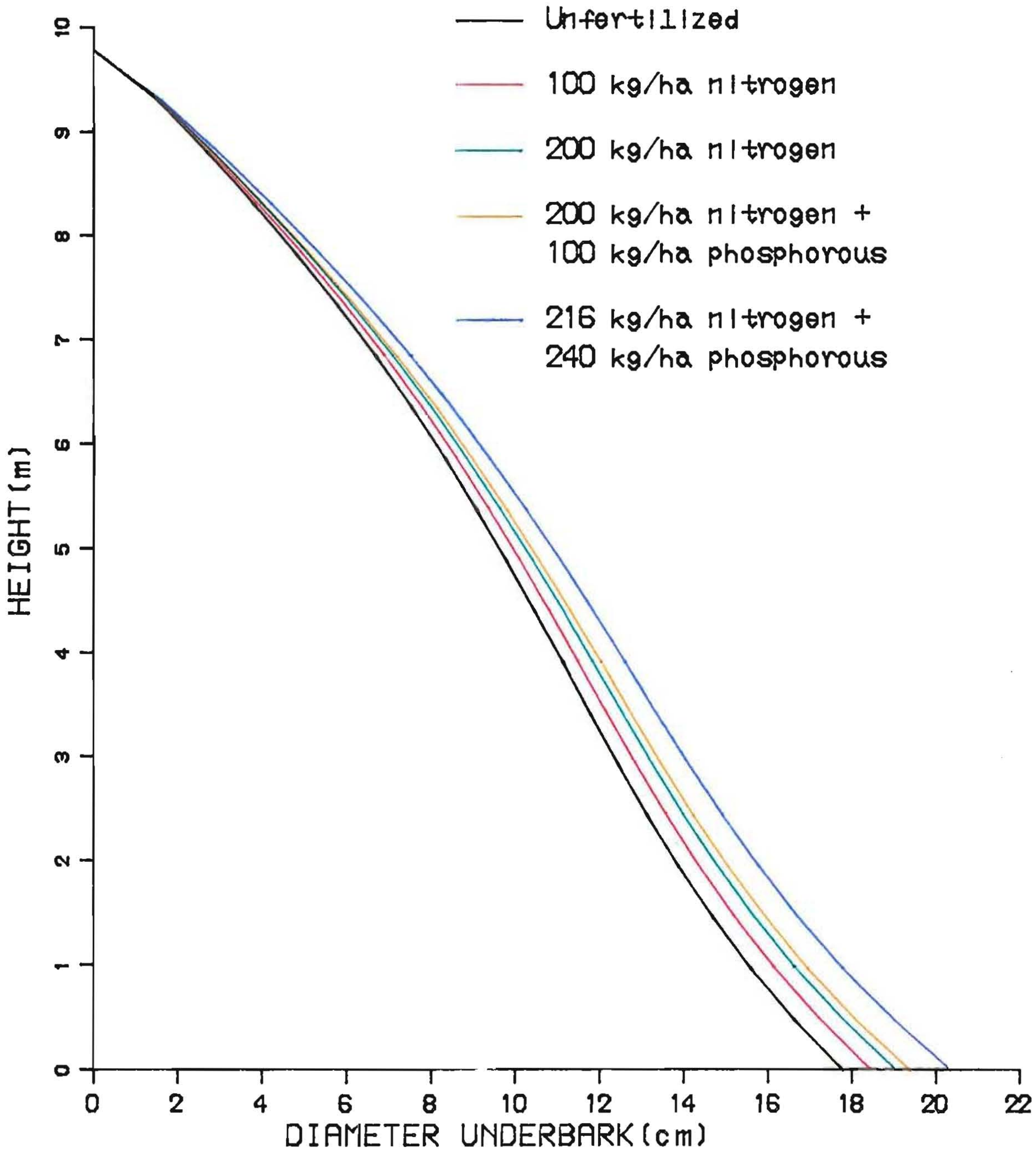


Fig. 13a. Profiles of mean trees as estimated by the underbark taper equation of stands fertilized at age 6.

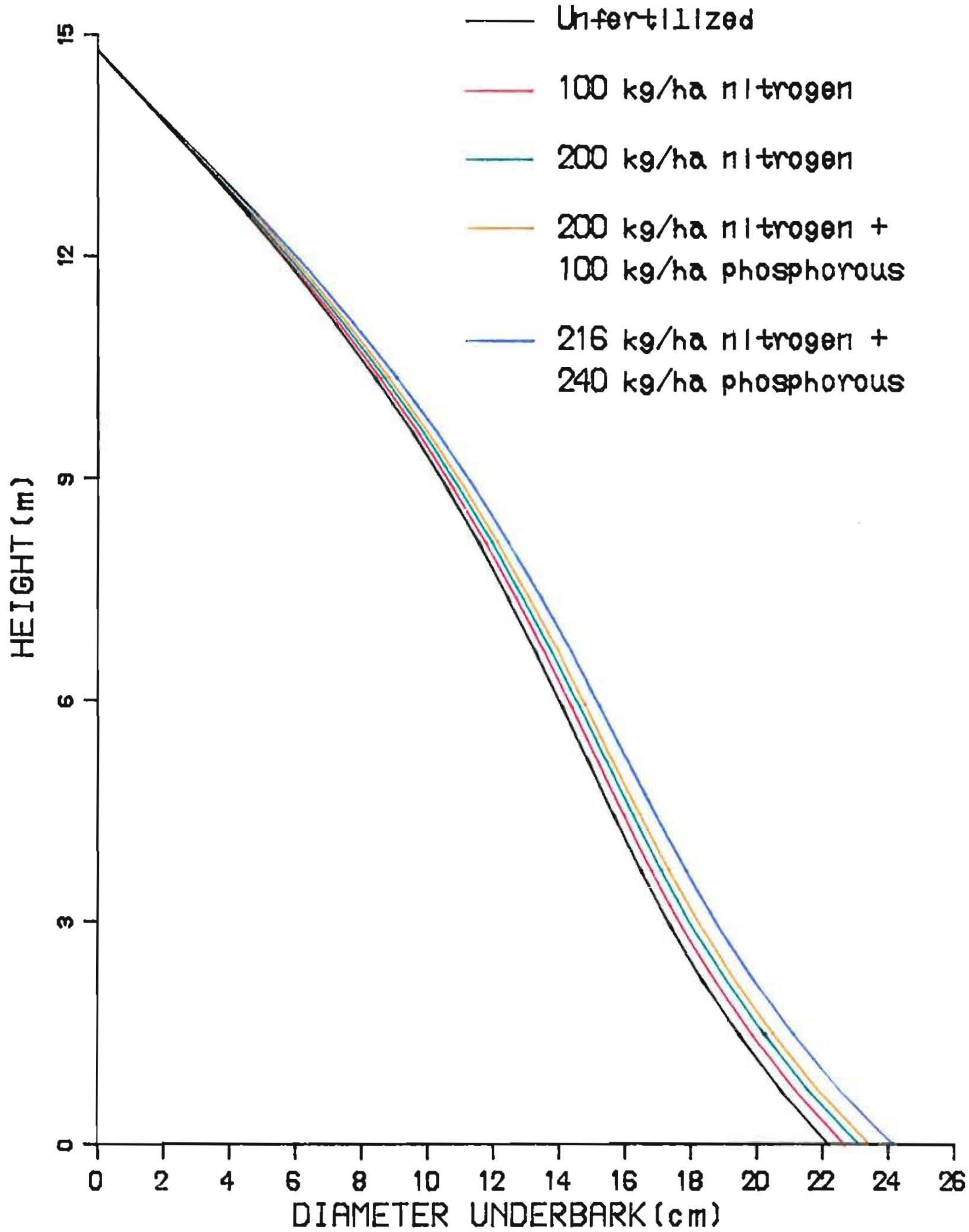


Fig. 13b. Profiles of mean trees as estimated by the underbark taper equation of stands fertilized at age 10.

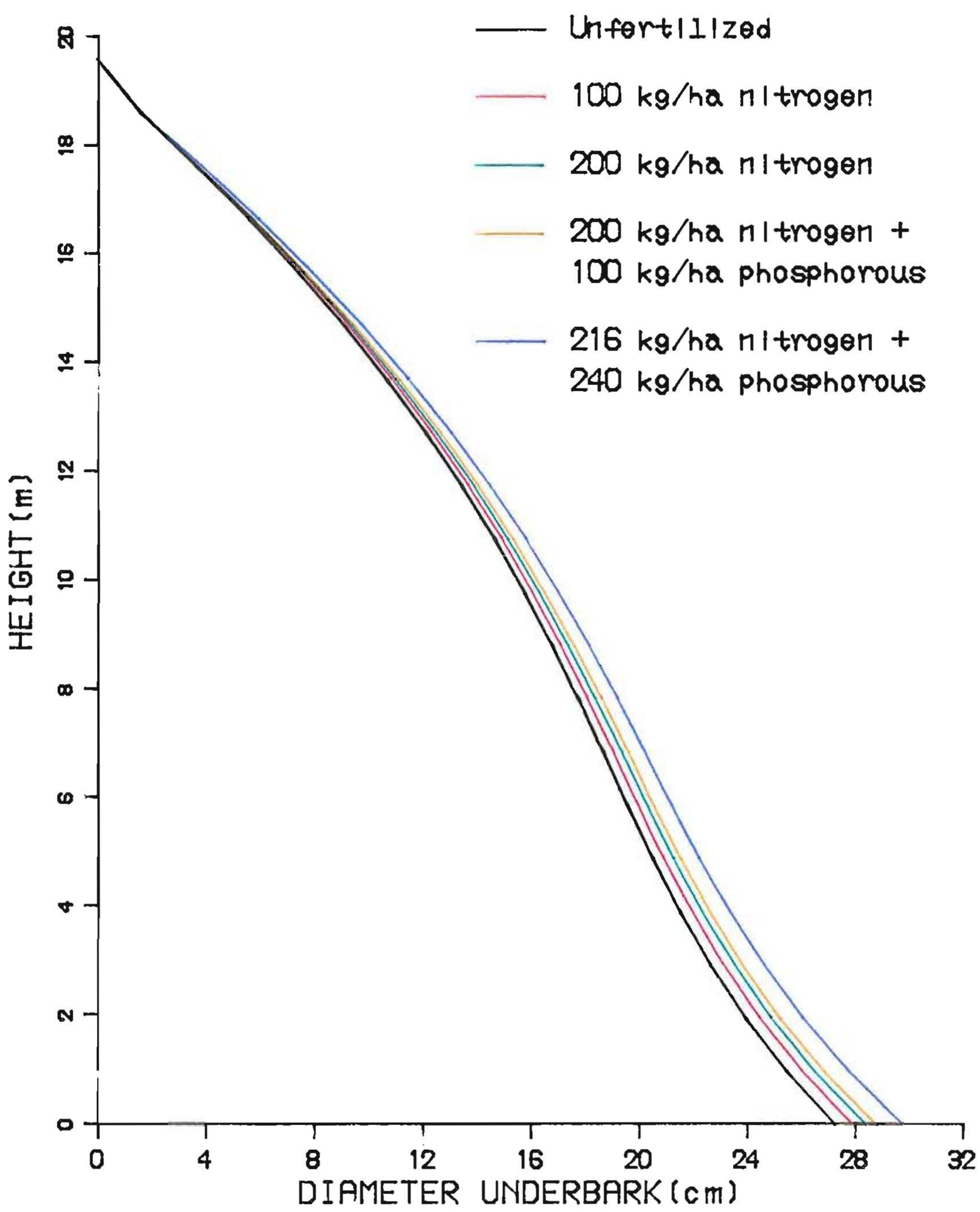


Fig. 13c. Profiles of mean trees as estimated by the underbark taper equation of age 14.

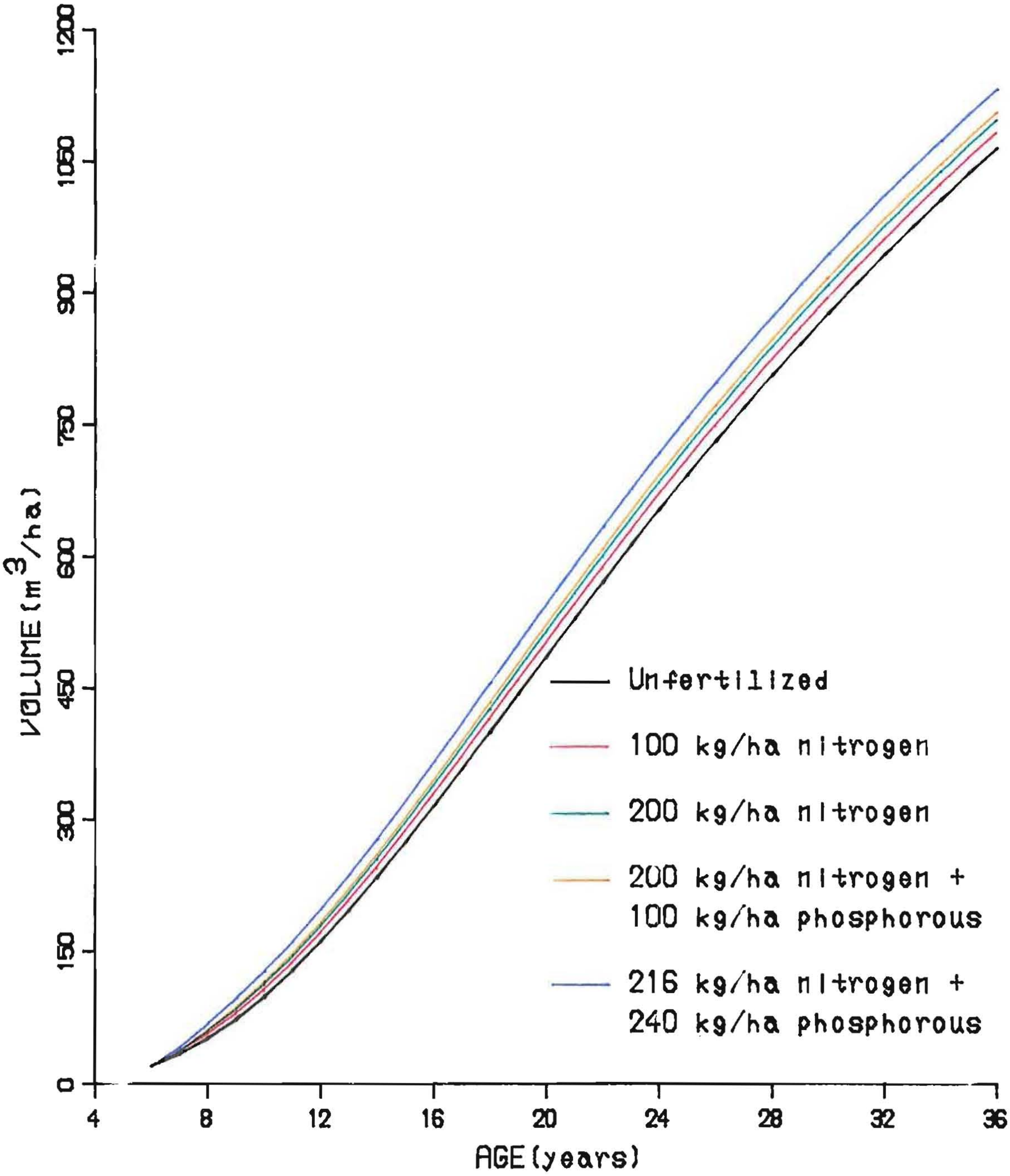


Fig. 14a. Net volume as estimated by the adjusted model and the volume system of stands fertilized at age 6.

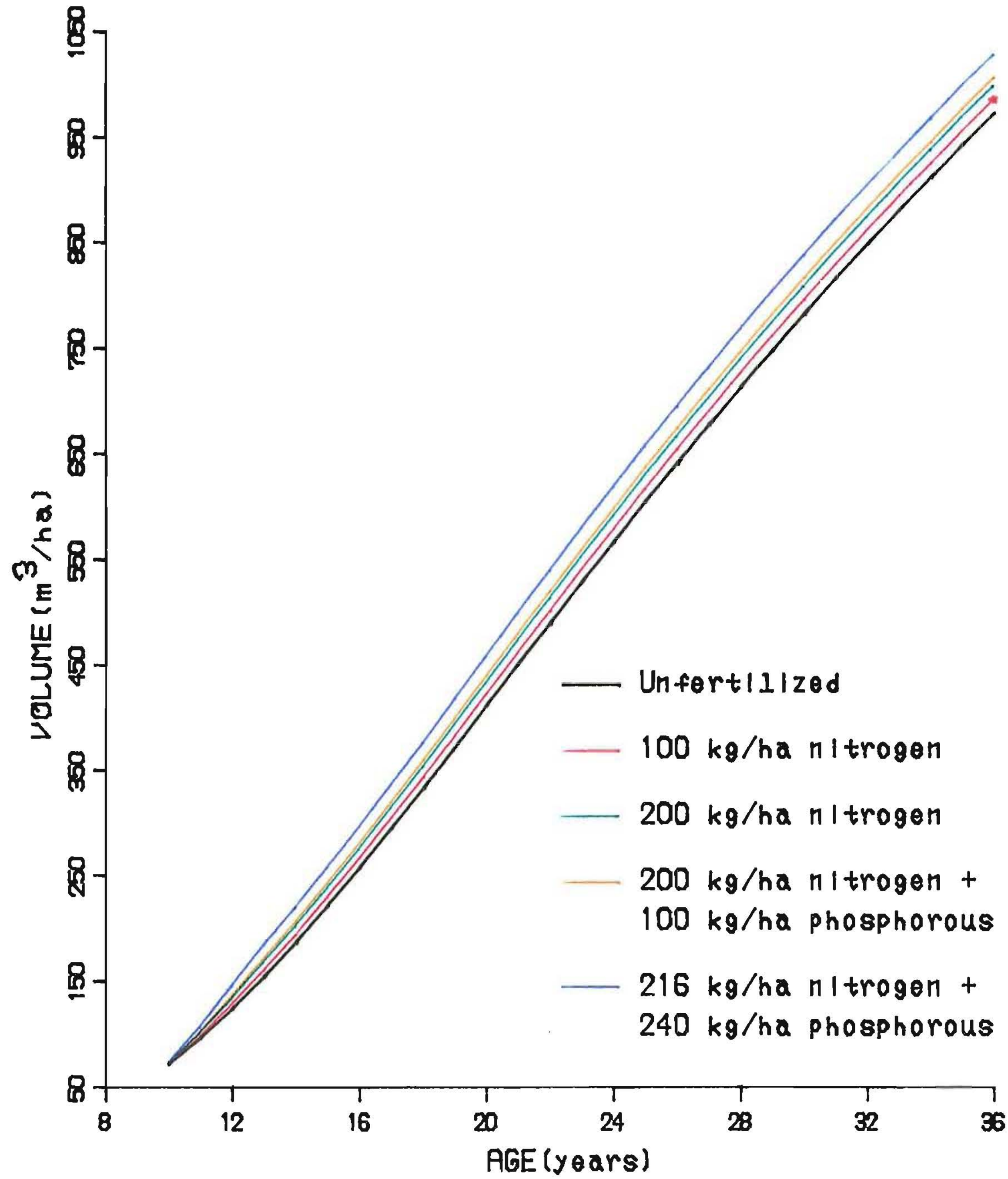


Fig. 14b. Net volume as estimated by the adjusted model and the volume system of stands fertilized at age 10.

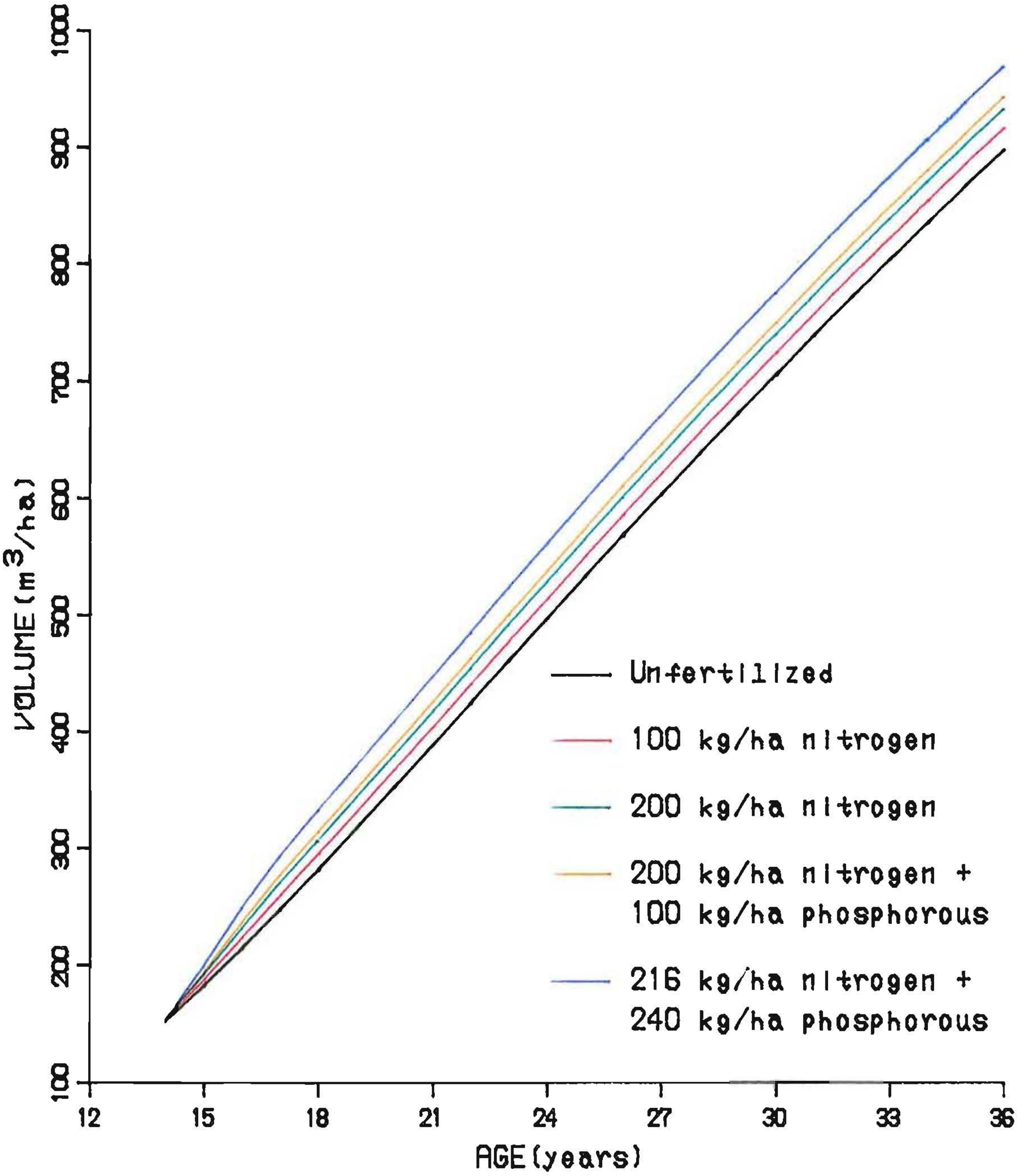


Fig. 14c. Net volume as estimated by the adjusted model and the volume system of stands fertilized at age 14.

Table 11. Estimates of underbark volumes of mean trees from the integrated taper equation for stands four years after fertilization for hypothetical stands and treatments in Golden Downs.

Volume is in m^3.

Treatment \ Age Fertilized:	6	10	14
Unfertilized	0.243	0.572	1.142
100 kg/ha nitrogen	0.261	0.598	1.195
200 kg/ha nitrogen	0.278	0.621	1.244
200 kg/ha nitrogen + 100 kg/ha phosphorous	0.289	0.637	1.276
216 kg/ha nitrogen + 240 kg/ha phosphorous	0.317	0.677	1.363

actual data to support this supposition were not available. It would seem possible, or even probable, however, that the results presented in Fig. 14 for volume response over the life of a stand do mirror reality. Unfortunately, whether or not this is true will not be known until many more studies are undertaken and completed.

CHAPTER 7

EVALUATION OF THE VOLUME SYSTEM WITH ESTIMATES OF GROWTH FROM THE ADJUSTED MODEL

The evaluation of the accuracy and precision of the volume estimating system in the previous chapter applies only when actual measurements for top height, basal area, and stocking are available. However, because this system is to be used in conjunction with the adjusted growth model, actual measurements for stand parameters will not generally be used with the volume estimating system. For example, when a simulation is done with the adjusted model, the user specifies the initial condition of the stand to be modelled. This is initial point, therefore, is the only point in the simulation that the values for stand parameters may be considered "known". As the stand is grown by the model, values for stand parameters at successive ages can only be considered estimates, rather than "known", values. Therefore, it would seem unlikely that volume estimates from stand statistics derived from the adjusted model would be as accurate and precise as suggested in Table 10. Consequently, the accuracy and precision of the volume system when used in conjunction with the adjusted model was examined.

Such an examination of the volume system may be done here using a subset of the stand measurement data used to derive the adjusted model and stand volume data from Golden Downs fertilizer trials used to derive the volume estimating system. This subset consisted of all observations for which sectional measurements had been done at some point. For example, trial N386 had sectional measurements done at the beginning of the trial in 1976 and at the end of the trial in 1980. Therefore, the observations from N386 used for this comparison were the 12 observations (one observation for each plot on the trial) that recorded a plot's initial top height, basal area, and stocking in 1976 and the values for the same parameters four years later in 1980; a similar subset also was taken for the other four trials in Golden Downs. The initial values for stand parameters of this subset of observations were then "grown" by the adjusted model to the subsequent time that sectional measurements had been done. In the case of N386, for example, stand parameters in 1976 for each plot were grown by the adjusted model to 1980. These estimated stand parameters from the adjusted model were then used with the volume estimating system to obtain estimates of stand volume. These estimates of stand volume were then compared to the true stand volumes described earlier and residuals were calculated and analyzed. In this way, an estimate of the accuracy and precision of the volume estimating system used in conjunction with the adjusted model was obtained.

Before examining the results of this analysis of residuals, however, it is first necessary to examine how well stand parameters were estimated for the subset of P.S.P. data described in the previous paragraph. This was done to determine whether residuals for stand growth for these observations were "extreme"; if so, the evaluation of the volume system is of limited value. To do this, the stand parameters estimated by the model were compared to the actual stand parameters for this subset of data and residuals calculated and analyzed. Table 12 and Fig. 15 present the results of this analysis.

Table 12 and Fig. 15 show that estimates of stand parameters from the adjusted model for this subset of data do not appear much different from what might be expected for either accuracy or precision as compared to similar values in Tables 3 to 6 and Figs. 5 to 8. The mean bias in Table 12 and Fig. 15 is non-significant and appears to have no pattern with increasing time since fertilization except for stocking, which is considered unreliable for reasons explained earlier. The precision of estimates also appears comparable; standard errors, maximum residuals, and percent standard errors are slightly higher for these selected observations than the whole data set, but not enough to conclude that these estimates are considerably less precise than what may be expected. Furthermore, estimates of precision in Table 12 and Fig. 15 most likely suffer somewhat from small sample sizes for reasons explained earlier in the section titled "Validation" in Chapter 5. Therefore, it seems likely that any decrease in accuracy or precision of subsequent volume estimates is not due to estimates of stand parameters that are exceptionally inaccurate or imprecise.

Table 13 presents the results of the analysis of residuals done by comparing true volumes against volume estimates obtained by using the volume estimating system with estimates of stand parameters from the adjusted model. It is particularly noteworthy that volume estimates are not

Table 12. Reliability of estimates of growth from the adjusted model for stands in Golden Downs for which sectional measurements were recorded.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED (All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	--	--	--	--	--	--	0
2	-0.61	--	--	--	--	--	1
3	-0.73	0.410	-1.786	1.91	1.57	26.1	6
4	0.56	0.453	1.233	2.73	2.04	22.3	11
Total	0.13	0.335	0.391	2.62	1.45	23.1	18
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	--	--	--	--	--	--	0
2	-0.14	--	--	--	--	--	1
3	0.77	0.366	2.096	1.82	1.36	26.8	6
4	0.07	0.245	0.294	1.38	0.76	32.3	11
Total	0.31	0.202	1.519	1.68	0.69	29.3	18
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	--	--	--	--	--	--	0
2	-5.6	--	--	--	--	--	1
3	4.2	2.84	1.485	12.4	0.93	306.7	6
4	26.5	8.48	3.128*	66.9	1.24	681.7	11
Total	17.9	5.79	3.098**	56.4	1.06	544.8	18
UNFERTILIZED (Stands less than 44 years of age)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	--	--	--	--	--	--	0
2	-0.61	--	--	--	--	--	1
3	-0.73	0.410	-1.786	1.91	1.57	26.1	6
4	0.20	0.234	0.848	1.10	1.61	14.5	8
Total	-0.15	0.236	-0.620	1.65	1.24	19.1	15
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	--	--	--	--	--	--	0
2	-0.14	--	--	--	--	--	1
3	0.77	0.366	2.096	1.82	1.36	26.8	6
4	0.23	0.322	0.704	1.49	1.75	18.4	8
Total	0.44	0.228	1.916	1.77	1.07	21.4	15
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	--	--	--	--	--	--	0
2	-5.6	--	--	--	--	--	1
3	4.2	2.84	1.485	12.4	0.93	306.7	6
4	29.8	11.60	2.573*	72.5	1.45	800.0	8
Total	18.0	6.96	2.580*	58.5	1.20	580.4	15

Table 12. (cont.) Reliability of model estimates for growth of stands in Golden Downs for which sectional measurements were recorded.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
FERTILIZED (All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	--	--	--	--	--	--	0
2	-0.46	0.315	-1.473	0.95	2.32	13.6	3
3	0.10	0.176	0.584	1.39	0.65	27.1	18
4	0.39	0.251	1.566	2.29	1.38	18.2	21
Total	0.21	0.150	1.382	2.04	0.69	21.7	42
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	--	--	--	--	--	--	0
2	1.38	0.555	2.481	2.33	3.72	14.9	3
3	-0.06	0.327	-0.173	2.55	1.17	28.0	18
4	-0.40	0.314	-1.289	2.82	1.28	24.6	21
Total	-0.13	0.221	-0.580	2.95	0.87	25.3	42
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	--	--	--	--	--	--	0
2	-5.4	6.65	-0.817	16.0	1.51	441.0	3
3	4.9	1.37	3.551**	14.1	0.46	300.6	18
4	14.2	4.52	3.135**	47.5	0.84	540.5	21
Total	8.8	2.52	3.488**	38.0	0.58	430.6	42
FERTILIZED (Stands less than 44 years of age)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	--	--	--	--	--	--	0
2	-0.46	0.315	-1.473	0.95	2.32	13.6	3
3	0.10	0.176	0.584	1.39	0.65	27.1	18
4	0.10	0.163	0.617	1.29	1.17	13.9	18
Total	0.06	0.114	0.513	1.45	0.57	20.0	39
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	--	--	--	--	--	--	0
2	1.38	0.555	2.481	2.33	3.72	14.9	3
3	-0.06	0.327	-0.173	2.55	1.17	28.0	18
4	-0.15	0.308	-0.485	2.42	1.78	17.3	18
Total	0.01	0.217	0.050	2.75	0.98	22.0	39
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	--	--	--	--	--	441.0	0
2	-5.4	6.65	-0.817	16.0	1.51	441.0	3
3	4.9	1.37	3.551**	14.1	0.46	300.6	18
4	14.3	5.29	2.693*	49.3	0.93	570.8	18
Total	8.4	2.70	3.109**	38.4	0.62	436.1	39

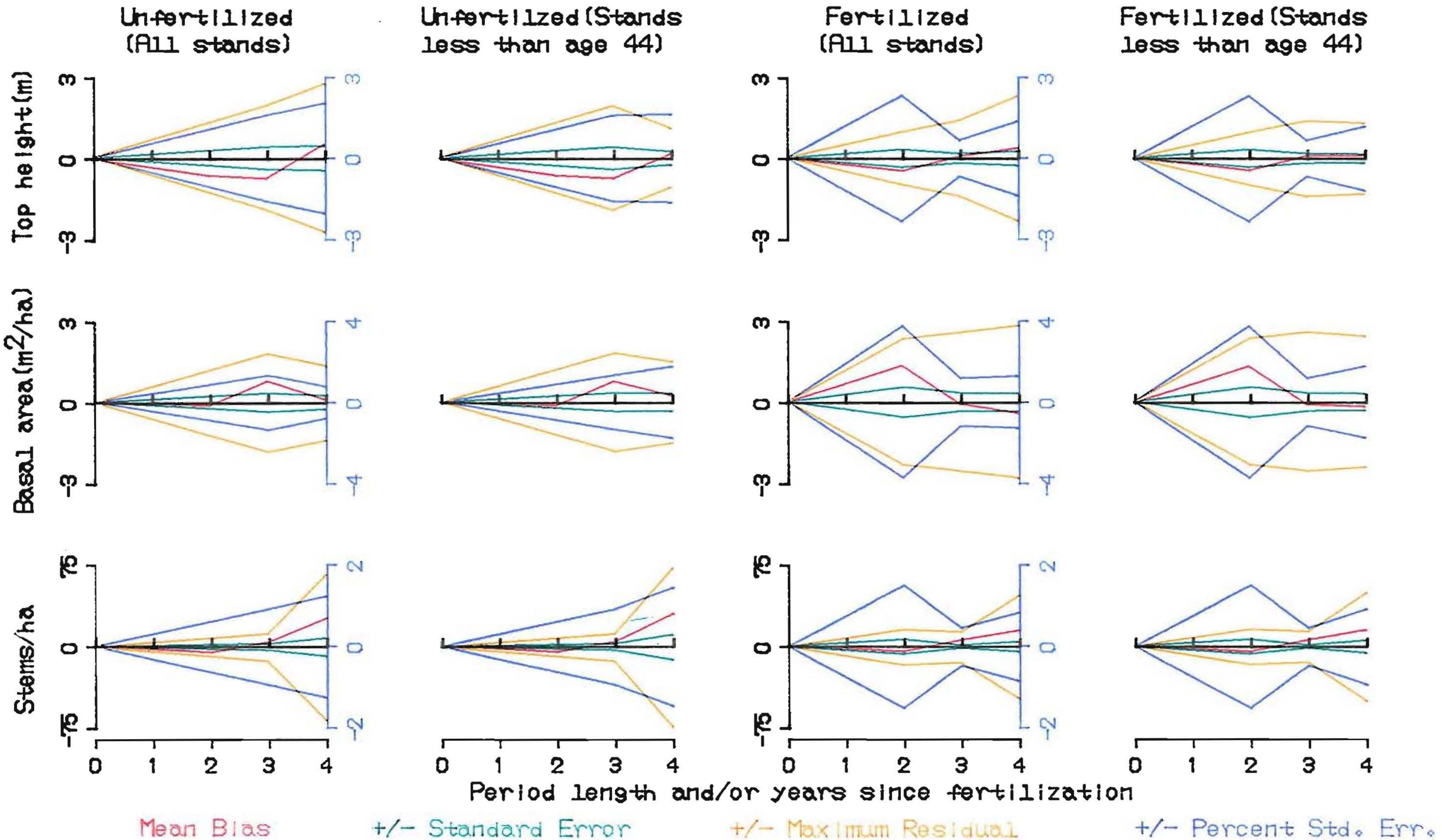


Fig. 15. Graphical depiction of reliability of estimates as presented in Table 12.

Table 13. Reliability of estimates from the Golden Downs volume system using model-estimated stand parameters for unfertilized and fertilized stands in Golden Downs.

	MB	SEB	t value	Max. Resid.	SE%	Mean Volume	n
	(m^2/ha)			(m^2/ha)		(m^2/ha)	
ALL STANDS							
		Underbark volume					
Unfertilized	-6.45	4.37	-1.475	36.19	1.58	276.8	18
Fertilized	4.30	3.22	1.333	43.69	1.44	223.4	42
		Overbark volume					
Unfertilized	-7.42	5.11	-1.451	42.25	1.55	330.6	18
Fertilized	2.42	3.41	0.709	45.56	1.29	264.0	42
STANDS LESS THAN 44 YEARS OLD							
		Underbark volume					
Unfertilized	-0.30	3.30	-0.091	22.80	2.09	157.7	15
Fertilized	3.07	2.07	1.486	26.97	1.21	171.1	39
		Overbark volume					
Unfertilized	0.17	3.58	0.047	24.60	1.88	189.1	15
Fertilized	0.85	2.01	0.420	25.57	1.00	201.6	42

significantly biased for any case as shown in Table 13. However, as might be expected, precision appears to have been harmed by the use of estimated stand parameters; comparing values for precision of estimates in Table 13 with similar values in Table 10, shows that the standard errors and maximum residuals are higher in Table 13. Notably, any decrease in precision, as measured by standard error and maximum residual, is approximately the same for both unfertilized and fertilized stands and would actually appear to be relatively small. However, percent standard error in the two tables would suggest that relative precision has actually increased for underbark volumes. Consequently, it would seem that the precision of volume estimates has not suffered a great deal, if at all, by using estimates of growth from the adjusted model. Certainly then, it may be concluded from this analysis that the volume estimating system gives reasonably accurate and precise estimates of volume when used in conjunction with the adjusted model.

As a final comparison and point of reference, analysis of residuals for underbark volume estimates in Table 13 may be compared with the analysis of residuals presented in Table 7 for volumes estimated by the P.S.P. system. This comparison shows that absolute mean bias from Table 13 is generally lower than from Table 7, which is indicative that estimates of volumes using estimated stand parameters are slightly more accurate than estimates from the P.S.P. volume system with actual stand parameters. The same may be said of precision as standard errors, maximum residuals, and SE%s are better in all cases in Table 13. Consequently, the volume estimating system derived in this study can be definitely be considered better than the P.S.P. volume system for estimating volumes of both fertilized and unfertilized stands.

In conclusion, while precision of volume estimates does suffer using estimated rather than actual stand parameters, estimates are still unbiased. Furthermore, estimates of underbark volume from the volume estimating system explained in Chapter 6 for unfertilized stands using estimated stand parameters are slightly better than volume estimates from the P.S.P. system using actual stand parameters. For fertilized stands, using estimated stand parameters with the volume methodology developed in Chapter 6 yields estimates of volume approximately one and a half times as accurate and precise as estimates obtained from using the P.S.P. volume system with actual stand parameters. Therefore, the analysis presented in this chapter should provide a user of the methodology developed in this study with a reasonably high level of confidence in subsequent estimates of growth and yield for Golden Downs.

CHAPTER 8

EVALUATION OF STAND GROWTH METHODOLOGY ON OTHER AREAS IN NELSON

This chapter evaluates how well the growth functions of the adjusted model apply to data for each of four areas in Nelson other than Golden Downs which contain substantial areas of radiata pine, and for which yield forecasts are likely to be needed in the future: the four areas are Pigeon Valley, Motueka, Harakeke, and Rabbit Island. The evaluation proceeded in the following way: stand remeasurement data described in Chapter 3 for unfertilized and fertilized stands for each of the four areas were "grown" by the adjusted model from the age of the initial measurement of a stand to each age at which it was subsequently remeasured. Estimates from the model were then compared to the actual measurements, and residuals were calculated and analyzed in the same way as for the Golden Downs stand remeasurement data (see explanations in Chapters 4 and 5).

Results of this analysis are presented for Pigeon Valley in Table 14; for Motueka in Table 15; for Harakeke in Table 16; and for Rabbit Island in Table 17. Fig. 16 summarizes the results of all four tables. It is important to keep two points in mind concerning these results. First, because the growth methodology being evaluated is for Golden Downs, the growth in Golden Downs is used as the standard against which the other areas are compared. Thus for example, if the growth of top height on an area is overestimated by the model, it is deduced that top height growth on

Table 14. Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Pigeon Valley.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.67	0.172	-3.907	1.05	0.81	21.2	3
2	-0.53	0.455	-1.176	2.57	2.41	18.9	10
3	0.62	0.398	1.548	1.76	1.85	21.5	6
4	0.20	0.301	0.664	2.02	1.48	20.3	14
Total	-0.03	0.211	-0.125	2.42	1.05	20.2	33
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	-0.04	0.284	-0.147	0.59	0.59	48.5	3
2	-0.61	0.259	-2.357*	1.73	0.98	26.5	10
3	-1.07	0.451	-2.380	2.39	1.64	27.5	6
4	-1.46	0.358	-4.080**	3.57	1.84	19.5	14
Total	-1.00	0.202	-4.960**	3.08	0.79	25.7	33
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	20.6	3.04	6.776*	31.0	0.25	1239.0	3
2	10.7	3.38	3.160*	25.8	0.37	919.2	10
3	20.2	5.12	3.952*	37.8	0.51	1000.2	6
4	15.5	5.50	2.824*	46.2	0.85	645.9	14
Total	15.4	2.72	5.651**	44.1	0.32	847.0	33
FERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	--	--	--	--	--	--	0
2	0.13	0.681	0.189	2.48	4.09	16.7	6
3	0.58	0.199	2.922*	1.19	0.88	22.7	6
4	0.51	0.233	2.167*	2.56	1.17	19.9	27
Total	0.46	0.191	2.403*	2.60	0.96	19.8	39
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	--	--	--	--	--	--	0
2	-0.54	0.484	-1.109	1.96	2.93	16.5	6
3	-4.85	1.045	-4.640*	8.74	3.66	28.6	6
4	-1.74	0.553	-3.154**	6.57	2.54	21.8	27
Total	-2.04	0.463	-4.398**	7.21	2.10	22.0	39
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	--	--	--	--	--	--	0
2	11.2	3.87	2.898*	23.0	0.45	868.2	6
3	16.2	7.30	2.214	37.3	0.77	950.5	6
4	-3.3	7.56	-0.441	76.6	1.42	533.1	27
Total	1.9	5.49	0.347	69.7	0.85	648.9	39

Table 15. Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Motueka.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.20	0.084	2.428*	1.74	0.35	24.2	85
2	-0.14	0.138	-1.019	1.94	0.57	24.3	45
3	0.75	0.233	3.193*	1.72	1.85	12.6	9
4	0.92	0.210	4.372**	2.34	1.26	16.7	17
Total	0.21	0.071	3.018**	2.06	0.31	22.7	156
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.04	0.114	0.334	2.29	0.32	35.8	85
2	-0.15	0.297	-0.490	4.12	0.79	37.6	45
3	0.85	1.076	0.789	5.45	8.27	13.0	9
4	1.06	1.042	1.015	8.07	4.94	21.1	17
Total	0.14	0.166	0.860	4.72	0.50	33.4	156
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	8.4	1.44	5.856**	34.3	0.18	812.7	85
2	11.9	4.13	2.883**	62.3	0.52	787.0	45
3	11.1	1.32	8.372**	20.1	0.18	735.4	9
4	13.4	2.88	4.658**	33.2	0.40	727.8	17
Total	10.1	1.46	6.938**	47.3	0.18	791.6	156
FERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.04	0.175	-0.213	0.64	1.78	9.8	6
2	-0.30	0.244	-1.244	1.01	2.17	11.3	6
3	-0.31	0.514	-0.603	1.93	4.06	12.7	6
4	-0.13	0.650	-0.203	2.37	4.50	14.4	6
Total	-0.20	0.207	-0.946	1.98	1.72	12.0	24
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	1.19	0.851	1.397	3.65	8.75	9.7	6
2	1.44	1.801	0.802	6.95	13.02	13.8	6
3	1.56	2.531	0.618	9.54	14.90	17.0	6
4	1.18	2.964	0.400	10.94	14.96	19.8	6
Total	1.35	1.021	1.318	9.93	6.77	15.1	24
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	3.3	0.62	5.309**	5.8	0.08	736.8	6
2	8.3	1.46	5.668**	14.4	0.20	736.8	6
3	13.0	2.19	5.929**	22.5	0.30	736.8	6
4	18.8	3.04	6.195**	32.6	0.41	736.8	6
Total	10.8	1.53	7.099**	25.6	0.21	736.8	24

Table 16. Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Harakeke.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED (All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.04	0.060	-0.660	1.27	0.29	20.9	93
2	-0.48	0.170	-2.803**	2.46	0.62	27.6	42
3	0.36	0.162	2.238	0.57	0.40	40.6	2
4	0.11	0.238	0.480	1.80	0.90	26.6	17
5	-0.65	0.322	-2.007	1.81	2.35	13.7	8
Total	-0.16	0.065	-2.481*	1.70	0.28	23.1	162
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	-0.16	0.092	-1.732	1.98	0.39	23.7	93
2	-0.48	0.216	-2.219*	3.03	0.63	34.4	42
3	-0.67	0.143	-4.702	0.98	0.25	56.7	2
4	-1.53	0.379	-4.044**	4.05	1.25	30.3	17
5	-1.54	1.160	-1.324	5.82	6.62	17.5	8
Total	-0.46	0.108	-4.264**	2.93	0.40	27.2	162
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.8	1.45	1.908	31.4	0.21	681.3	93
2	7.2	4.44	1.628	60.8	0.68	655.0	42
3	11.7	4.69	2.485	17.8	0.99	476.0	2
4	18.3	4.90	3.736**	50.3	0.76	645.7	17
5	24.9	1.22	20.407**	42.5	0.16	741.0	8
Total	6.8	1.58	4.276**	42.8	0.24	671.2	162
UNFERTILIZED (Stands less than 29 years of age)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.04	0.060	-0.660	1.27	0.29	20.9	93
2	-0.53	0.174	-3.053**	2.49	0.64	27.0	40
3	--	--	--	--	--	--	0
4	0.13	0.270	0.471	1.88	1.09	24.6	15
5	-0.65	0.322	-2.007	1.81	2.35	13.7	8
Total	-0.18	0.067	-2.694**	1.94	0.30	22.4	156
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	-0.16	0.092	-1.732	1.98	0.39	23.7	93
2	-0.47	0.227	-2.059*	3.08	0.68	33.3	40
3	--	--	--	--	--	--	0
4	-1.62	0.426	-3.803**	4.20	1.60	26.5	15
5	-1.54	1.160	-1.324	5.82	6.62	17.5	8
Total	-0.45	0.112	-4.007**	3.33	0.43	26.1	156

Table 16. (cont.) Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Harakeke.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED(Stands less than 29 years old)							
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.8	1.45	1.908	31.4	0.21	681.3	93
2	7.4	4.66	1.589	61.9	0.70	664.0	40
3	--	--	--	--	--	--	0
4	18.1	5.57	3.257**	51.0	0.83	668.3	15
5	24.9	1.22	20.407**	42.5	0.16	741.0	8
Total	6.6	1.63	4.020**	48.6	0.24	678.7	156
FERTILIZED (All stands)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.07	0.178	-0.380	1.18	1.82	9.8	14
2	0.62	0.171	3.616**	2.60	0.77	22.3	42
3	0.06	1.184	0.051	2.47	3.47	34.1	3
4	0.60	0.214	2.811**	3.25	0.85	25.0	46
5	-0.45	0.330	-1.369	1.12	2.39	13.8	4
Total	0.47	0.120	3.894**	2.97	0.55	21.8	109
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	-0.56	0.256	-2.199*	1.98	3.66	7.0	14
2	0.40	0.253	1.597	3.46	1.04	24.3	42
3	1.35	0.326	4.139	2.10	0.67	48.9	3
4	-0.43	0.400	-1.086	5.67	1.36	29.4	46
5	-3.70	0.469	-7.879**	5.79	2.42	19.4	4
Total	-0.20	0.213	-0.933	4.95	0.86	24.7	109
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.7	0.58	4.702**	6.3	0.09	611.9	14
2	9.3	1.79	5.195**	30.5	0.28	627.9	42
3	7.1	2.87	2.487	12.1	0.81	354.3	3
4	11.8	3.68	3.212**	57.2	0.58	631.2	46
5	25.4	1.24	20.544**	39.0	0.17	741.0	4
Total	10.0	1.74	5.782**	46.1	0.28	623.9	109
FERTILIZED(Stands less than 29 years old)							
			Top Height				
	(m)	(m)		(m)		(m)	
1	-0.07	0.178	-0.380	1.18	1.82	9.8	14
2	0.61	0.170	3.598**	2.50	0.80	21.4	39
3	--	--	--	--	--	--	0
4	0.57	0.224	2.552*	3.23	0.93	24.2	43
5	-0.45	0.330	-1.369	1.12	2.39	13.8	4
Total	0.46	0.123	3.724**	2.89	0.59	20.7	100

Table 16. (cont.) Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Harakeke.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
FERTILIZED(Stands less than 29 years old)							
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	-0.56	0.256	-2.199*	1.98	3.66	7.0	14
2	0.38	0.272	1.412	3.54	1.20	22.6	39
3	--	--	--	--	--	--	0
4	-0.41	0.414	-0.988	5.64	1.48	28.0	43
5	-3.70	0.469	-7.879**	5.79	2.42	19.4	4
Total	-0.25	0.225	-1.126	4.99	0.99	22.6	100
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.7	0.58	4.702**	6.3	0.09	611.9	14
2	9.7	1.90	5.136**	31.3	0.29	649.0	39
3	--	--	--	--	--	--	0
4	13.0	3.80	3.432**	57.9	0.58	651.7	43
5	25.4	1.24	20.544**	39.0	0.17	741.0	4
Total	10.8	1.84	5.873**	47.2	0.28	648.6	100

Table 17. Reliability of estimates of growth from the adjusted model for unfertilized and fertilized stands in Rabbit Island.

Years Since Fert.	MB	SEB	t value	Max. Resid.	SE%	Mean Value	n
UNFERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.24	0.435	0.547	2.48	1.88	23.2	11
2	-0.33	0.133	-2.453*	1.27	0.50	26.5	20
3	-0.20	0.266	-0.739	1.34	0.88	30.2	9
4	-0.26	0.248	-1.039	2.06	0.87	28.5	19
Total	-0.18	0.128	-1.397	2.17	0.47	27.1	59
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.13	0.222	0.570	1.26	1.11	20.0	11
2	-0.48	0.203	-2.376*	1.93	0.76	26.8	20
3	-0.17	0.505	-0.336	2.46	1.20	41.9	9
4	-0.32	0.592	-0.541	4.82	1.58	37.6	19
Total	-0.27	0.217	-1.236	3.58	0.69	31.3	59
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	3.0	0.30	9.907**	5.5	0.08	351.5	11
2	3.5	2.57	1.381	22.5	0.64	403.9	20
3	12.6	3.64	3.454**	28.0	0.74	491.6	9
4	21.2	6.84	3.096**	68.4	1.17	584.7	19
Total	10.5	2.61	4.021**	47.9	0.56	465.7	59
FERTILIZED							
			Top Height				
	(m)	(m)		(m)		(m)	
1	0.05	0.114	0.404	0.90	0.58	19.7	18
2	-0.61	0.142	-4.278**	1.60	0.68	20.9	18
3	-0.95	0.227	-4.176**	1.97	1.16	19.6	9
4	-1.64	0.321	-5.105**	3.23	1.54	20.8	9
Total	-0.62	0.118	-5.256**	2.24	0.58	20.3	54
			Basal Area				
	(m^2/ha)	(m^2/ha)		(m^2/ha)		(m^2/ha)	
1	0.24	0.556	4.377**	0.63	0.36	15.6	18
2	0.56	0.234	2.400*	2.11	1.21	19.4	18
3	0.58	0.298	1.949	1.77	1.38	21.7	9
4	0.42	0.352	1.191	1.86	1.41	25.0	9
Total	0.44	0.109	3.981**	1.92	0.56	19.5	54
			Stocking				
	(stms/ha)			(stms/ha)		(stms/ha)	
1	2.9	0.24	12.016**	5.8	0.07	374.7	18
2	6.2	0.56	10.999**	12.5	0.15	374.7	18
3	13.6	0.17	81.929**	23.4	0.03	500.0	9
4	19.2	0.23	81.631**	33.1	0.05	500.0	9
Total	8.5	0.84	10.083**	22.2	0.20	416.4	54

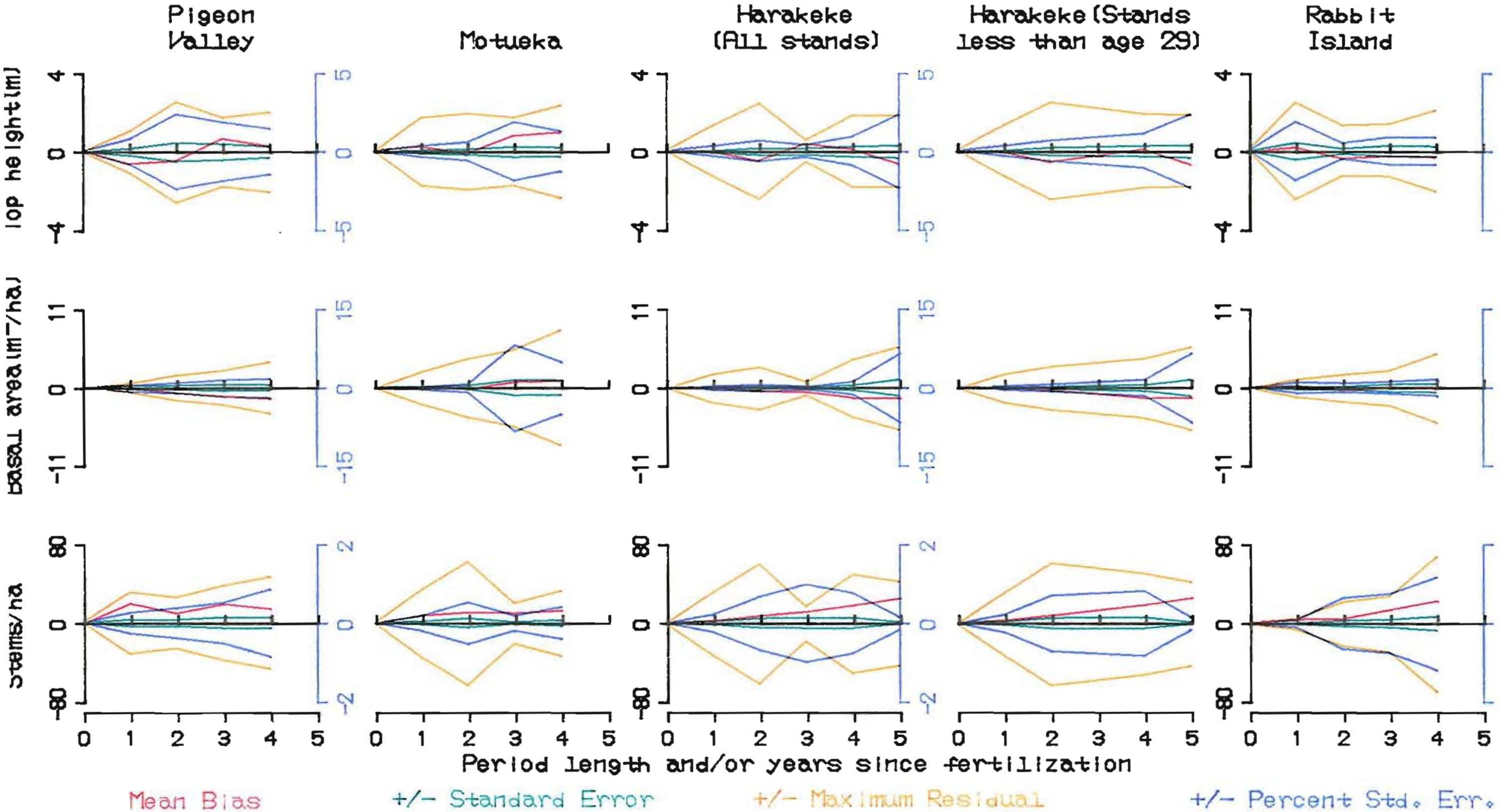


Fig. 16a. Graphical depiction of reliability of estimates as presented in Tables 14 to 17 for unfertilized stands.

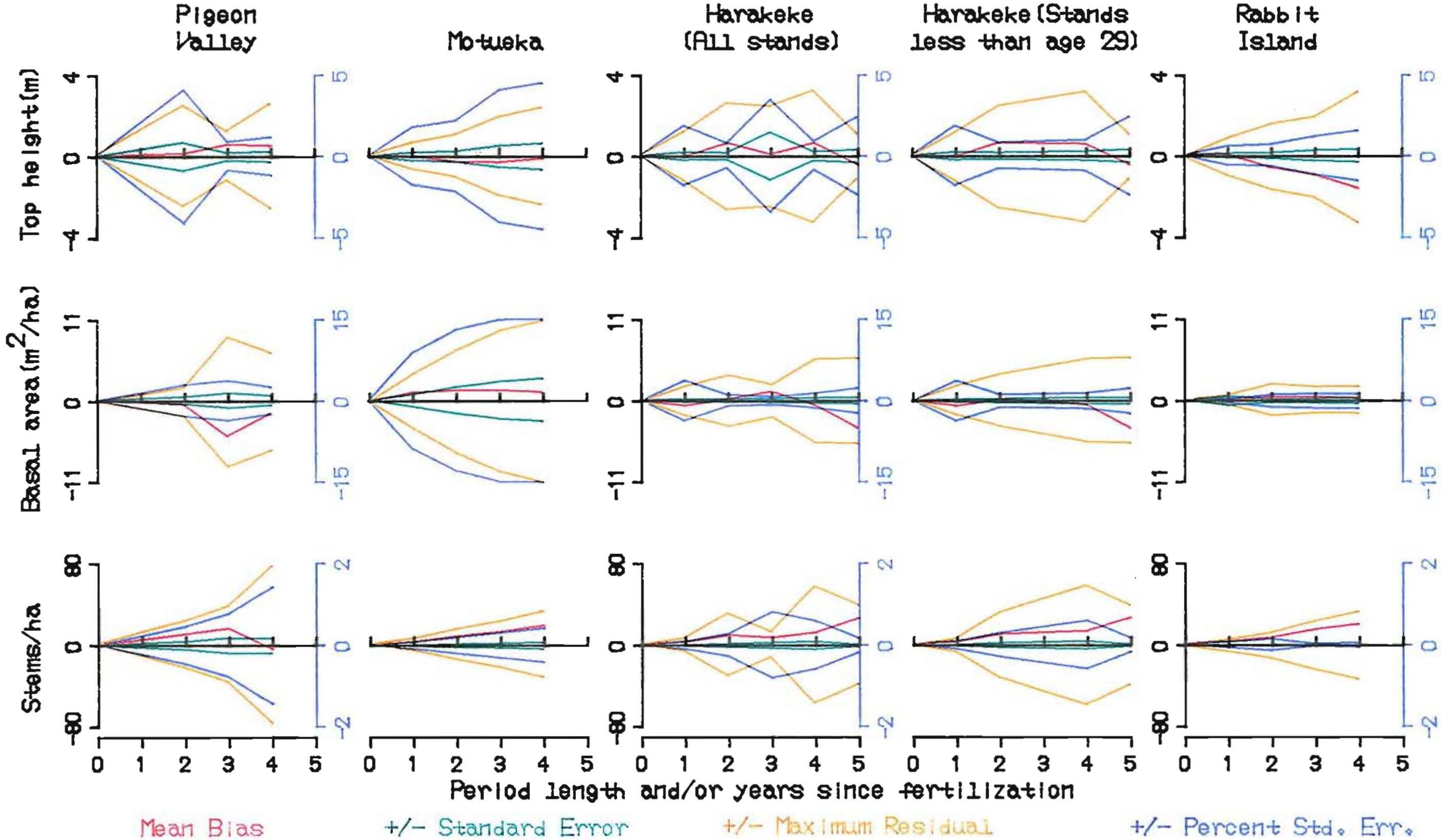


Fig. 16b. Graphical depiction of reliability of estimates as presented in Tables 14 to 17 for fertilized stands.

that area is slower than on Golden Downs. Second, estimates of stocking from the model have already been shown to be unreliable for Golden Downs; the same is also true of the other four areas. Consequently, though results of the analysis of residuals for stocking are presented in Tables 14 to 17 and Fig. 16, they are not discussed further.

Tables 14 to 17 and Fig. 16 show that top height growth of unfertilized stands in the four areas is approximately equivalent to that in Golden Downs. Mean bias is generally statistically non-significant and the standard errors, maximum residuals, and percent standard errors are relatively similar for all areas. Furthermore in most cases, though the absolute mean bias is generally greater for estimates for each of these areas than for estimates for Golden Downs (see Table 3 and Fig. 5 for comparison), the precision as measured by standard error, maximum residual, and percent standard error is approximately the same. Only Motueka and Rabbit Island might be considered exceptional. For Motueka the mean bias is statistically significant except for the two year prediction period. The bias is positive which therefore implies that top height growth of unfertilized stands for Motueka is better than for Golden Downs. For Rabbit Island, though the mean bias is generally statistically non-siginificant, it tends to be negative indicating slight overestimation.

For top height growth of fertilized stands, Tables 14 to 17 and Fig. 16 show that the model is generally applicable to the four areas, though this is not strictly the case. For Harakeke, the prediction periods with the largest sample sizes (two and four years) show remarkably consistent positive bias. Consequently, though all results for top height of fertilized stands in Table 16 do not agree, it is suggested here that the model will actually underestimate top height of fertilized stands in Harakeke. Because this is not true for unfertilized stands in Harakeke, there may be a top height response in Harakeke, which has also been suggested in other stands on Mapua Hill soils at Mahana, Tasman, and Waiwhero in the Nelson region (Jacks et al., 1972). The results presented in Tables 14 to 17 and Fig. 16 also suggest that top height growth for Motueka and Rabbit Island actually has been decreased by the fertilizers applied to each area; the mean bias for fertilized stands of both areas is consistently less than for the unfertilized stands of each area. Because this is reduction could be considered unexpected, the response to fertilizer of various trials throughout Nelson were examined (Jacks et al., 1972) to determine if a negative response in height has been documented in Motueka or Rabbit Island. No such response has been noted for Motueka, while, for Rabbit Island, no studies were available. Consequently, the raw data were re-examined more closely. For Motueka, it was found that the top height of one fertilized plot of trial N193 was consistently severely overestimated, whereas the other fertilized plots of trial N193 had less severe bias that was both positive and negative. As a result, the atypical plot was discarded and the trends in top height for the remaining five plots were re-analyzed. This analysis produced results similar to those for top height growth of unfertilized stands in Motueka. Therefore, it was concluded that the apparent negative top height response induced by fertilization in Motueka arose from data from a single plot that could be considered atypical. For Rabbit Island, however, no such explanation exists. Of the nine fertilized plots on N434, there appeared to be no plots whose residuals were noticeably consistently larger than the residuals of other plots. Nor was there a case where the plots of a particular treatment had exceptional residuals. Consequently, it is concluded that nitrogen fertilization on Rabbit Island may, in fact, induce a negative height response, a result which should be examined in future studies.

For basal area growth of unfertilized stands, Tables 14 to 17 and Fig. 16 show that only Rabbit Island is reasonably similar to Golden Downs; the mean bias for basal area growth in Rabbit Island is slightly negative though generally not statistically significant, and standard errors, maximum residuals, and percent standard errors are similar to the same statistics for Golden Downs. For Pigeon Valley and Harakeke, basal area growth is overestimated indicating that each has slower basal area growth than Golden Downs. For Motueka, basal area growth is underestimated, though not significantly, indicating that Motueka may have slightly greater basal area growth than Golden Downs. However, the percent standard errors for Motueka and Harakeke, particularly for longer prediction periods, are generally larger than for Golden Downs indicating that though basal area growth may tend to be overestimated for Harakeke and underestimated for Motueka, any particular stand on either of these areas may have greater or lesser basal area growth than Golden Downs on unfertilized stands.

For basal area growth of fertilized stands, Tables 14 to 17 and Fig. 16 show that, just as for unfertilized stands, Rabbit Island is the only area similar to Golden Downs; mean bias tends to be negative but this overestimation appears slight. Furthermore, the precision of estimates is also similar for Golden Downs and Rabbit Island. The other three areas, however, show great variation in how well basal area growth of fertilized stands is estimated by the model. Motueka in particular has relatively large standard errors. Consequently, though mean bias is consistently positive and seemingly large for Motueka, it is statistically non-significant. For Pigeon Valley, the precision of estimates as measured by percent standard error is poor compared to the precision for Golden Downs, and the mean bias is negative and statistically significant showing that the model has tended to overestimate the basal area growth of fertilized stands in Pigeon Valley. For Harakeke, because of the gap in the ages of the data, and the relatively small sample sizes for prediction periods of three and five years, it is also difficult to determine how applicable the model is to fertilized stands in Harakeke. For the prediction periods with the two largest sample sizes (two and four years), the mean bias is statistically non-significant and the precision of estimates is relatively good, as may be seen by the percent standard errors at these points. Consequently, it is concluded that the Golden Downs model is nearly applicable to Harakeke without any modification, though it may have a slight tendency to overestimate the growth of basal area of fertilized stands.

From the preceding discussion of trends in stand growth on various areas, it is apparent that when the growth methodology for Golden Downs is applied to another area, it is necessary to adjust estimates from the model to obtain more accurate estimates of top height, basal area, and possibly stocking for that area. Table 18 presents suggestions for adapting the stand growth methodology for top height and basal area for Golden Downs to each of the four other areas in Nelson considered in this study. Adjustments for stocking are not considered because results for this parameter are generally unreliable. To exemplify the use of the modifications suggested, if a stand in Harakeke is fertilized with nitrogen at age seven and grown for eight years by the model, 1.0 m^2/ha should be added to the estimate of basal area; had it been grown for three years, 0.6 m^2/ha should have been added.

These adaptations, while seeming relatively simple, involved careful analysis of much relevant information, particularly that contained in Tables 14 to 17 and Fig. 16. For example, no modification was suggested for top height of unfertilized stands in Pigeon Valley because, though mean bias is both positive and negative depending on the length of the prediction period, mean bias is minimal for the four year period where the sample size is relatively large. The modification suggested for basal area of fertilized stands in Motueka resulted from examining the magnitude of the mean bias, the relatively large standard errors, and the raw data

Table 18. Suggested modifications of estimates of growth from the adjusted model for applicability to other areas in Nelson.

	Top Height	Basal Area
PIGEON VALLEY		
Unfertilized	No modification.	Subtract 0.4 m^2/ha each year of the prediction period to a maximum of 2.0 m^2/ha.
Fertilized	If fertilized with both nitrogen and phosphorous before age 6 add 0.5 m; else no modification.	Subtract 2.0 m^2/ha.
MOTUEKA		
Unfertilized	Add 0.2 m for each year of the prediction period to a maximum of 1.0 m.	Add 0.2 m^2/ha for each year of the prediction period to a maximum of 1.0 m^2/ha.
Fertilized	Add 0.2 m for each year of the prediction period to a maximum of of 1.0 m.	Add 1.0 m^2/ha if only fertilized with nitrogen add 1.4 m^2/ha if fertilized with both nitrogen and phosphorous.
HARAKEKE		
Unfertilized	No modification.	Subtract 0.2 m^2/ha for each year of the prediction period to a maximum of 1.0 m^2/ha.
Fertilized	If fertilized with nitrogen at any age, or nitrogen and phosphorous before age 5, add 0.5 m; else no modification.	Subtract 0.2 m^2/ha.
RABBIT ISLAND		
Unfertilized	Subtract 0.2 m.	Subtract 0.25 m^2/ha.
Fertilized	Subtract 0.4 m for each year of the prediction period to a maximum of 1.6 m.	Add 0.3 m^2/ha.

to determine the approximate growth of stands receiving various types and rates of fertilizer.

Finally, it is emphasized that, due to limitations in the type and amount of data, the suggested adaptations in Table 18 may be considered no more than tentative until more data can be gathered and analyzed. This is particularly true for fertilized stands where not only must the differences in growth caused by physiographic features of each area be accounted for, but also the difference in the response induced by various rates of fertilization. In the absence of better methodology for estimating growth on the other areas, however, the guidelines presented in Table 18 for adaptation of the Golden Downs model to other areas in Nelson are likely to provide reasonably accurate and precise interim estimates of stand growth until refinements based on further accumulations of data for growth in all these localities can be obtained.

CHAPTER 9

EVALUATION OF VOLUME METHODOLOGY ON OTHER AREAS IN NELSON

I. EVALUATION OF THE ENTIRE GOLDEN DOWNS VOLUME SYSTEM

In addition to evaluating the applicability of the stand growth methodology to each of the four areas other than Golden Downs, the applicability of the Golden Downs volume estimating system was also evaluated. For a given area, measurements of stand top height, basal area, and stocking from P.S.P.s were used with the Golden Downs volume estimating system to obtain estimates of volume for each of the plots for which sectional measurements had been taken. These estimates were then compared to the true volumes of these stands and residuals were calculated and analyzed. Table 19 presents the results of this analysis for each area.

The values for mean bias in Table 19 show that the volumes of each area tend to be overestimated and, in most cases, the overestimation is either significant or highly significant. Furthermore, the precision of estimates, as measured by the percent standard error, is generally much higher for each area than for Golden Downs stands (see Table 10). Although a decrease in precision is somewhat to be expected, the magnitude of the decrease appears to be extreme. The overestimation and lack of precision is most apparent in Harakeke, particularly for young stands, but is also quite evident for stands in Pigeon Valley. Alter-

Table 19. Reliability of volume estimates from the Golden Downs volume system for unfertilized and fertilized stands in other areas.

	MB (m^3/ha)	SEB	t value	Max. Resid. (m^3/ha)	SE%	Mean Volume (m^3/ha)	n
PIGEON VALLEY							
		Underbark volume					
Unfertilized	-6.50	2.52	-2.574*	30.18	2.83	89.1	30
Fertilized	-8.01	2.55	-3.137**	31.90	1.63	156.3	30
		Overbark volume					
Unfertilized	-6.97	2.06	-3.384**	26.24	1.91	107.6	30
Fertilized	-13.65	2.32	-5.889**	37.07	1.27	182.8	30
MOTUEKA							
		Underbark volume					
Unfertilized	-2.22	0.83	-2.680*	10.98	1.59	51.9	36
Fertilized	-14.26	4.57	-3.122**	28.49	4.06	112.5	6
		Overbark volume					
Unfertilized	-4.15	1.05	-3.971**	15.22	1.73	60.6	36
Fertilized	-20.74	6.86	-3.022*	41.92	5.25	130.7	6
HARAKEKE(All stands)							
		Underbark volume					
Unfertilized	-10.73	4.02	-2.667*	45.00	3.78	106.5	26
Fertilized	-10.06	4.32	-2.330*	36.35	2.70	160.1	16
		Overbark volume					
Unfertilized	-10.34	2.57	-4.023**	32.55	1.98	130.1	26
Fertilized	-11.12	5.31	-2.094	43.57	2.76	192.2	16
HARAKEKE(Stands less than 29 years of age)							
		Underbark volume					
Unfertilized	-8.00	2.15	-3.730**	25.02	5.37	40.0	23
Fertilized	-8.64	1.90	-4.541**	19.71	2.72	70.0	13
		Overbark volume					
Unfertilized	-10.49	2.56	-4.089**	31.07	5.47	46.9	23
Fertilized	-13.84	2.34	-5.913**	29.09	2.92	80.1	13
RABBIT ISLAND							
		Underbark volume					
Unfertilized	-1.07	1.47	-0.725	11.62	2.02	72.7	18
Fertilized	-10.83	3.18	-3.407**	24.27	1.73	183.6	9
		Overbark volume					
Unfertilized	-3.34	1.58	-2.109	13.86	1.86	84.9	18
Fertilized	-10.48	3.57	-2.931*	25.10	1.61	221.9	9

nately, the best estimates for any of the four areas are of volumes of unfertilized stands in Rabbit Island. However, it is of note that volumes of fertilized stands in Motueka and Rabbit Island are underestimated far more than unfertilized stands in the same areas. This implies that volume responds to fertilizer much less on these areas than Golden Downs. While this may, in fact, be true, it is also possible that such a conclusion results simply because of the inability of one or more components of the Golden Downs volume estimating system to be applicable to either of these areas. Likewise, the same may be said of all overestimation and the relatively poor precision evident in Table 19.

To determine which components of the Golden Downs volume system are inapplicable to each of the other areas, each of the three components that comprise the Golden Downs volume estimating system (taper, tree height, and diameter distribution equations) was evaluated individually to determine its appropriateness for each area. In general, this was done by deriving equations for each area similar to the equations that comprise the Golden Downs volume estimating system, using stand statistics for each area with these equations, and comparing these estimates with estimates from the Golden Downs equations with estimates from each area's equations. The applicability of each of the three components of the Golden Downs volume system is examined in the following three sections.

II. EVALUATION OF INDIVIDUAL COMPONENTS

(1) Taper Equations

It would seem logical that the component most likely to cause much of the overestimation in Table 19 is the Golden Downs taper equations (15 and 16). Stand growth has already been shown to be generally slightly different from Golden Downs on each of the other four areas, and it seems at least possible that the taper of trees in the other areas is greater than in Golden Downs -- that is, there is less volume for a tree of given diameter and height in each of the other four areas than in Golden Downs. Consequently, the ability of the Golden Downs taper equations to estimate stem profiles on each of the other four areas was evaluated.

To evaluate the taper equations, a 20% sample of the sectional measurement data for each area was taken and reserved for the fitting of underbark and overbark taper equations for each area. The Golden Downs taper equations (15 and 16) were then used to estimate the diameters of the remaining 80% of the data and were integrated for stem volume for all trees on each area. Estimates of diameter and volume where then compared to actual measurements and residuals calculated and analyzed. The results of this analysis are presented in Table 20 and the results for diameter are depicted graphically in Fig. 17.

The statistics for residuals of volume estimates in Table 20 show that, in many cases, the Golden Downs taper equations are responsible for much of the overestimation and loss of precision (as measured by percent standard error) of stand volume estimates for each area caused by the Golden

Table 20. Reliability of estimates from the Golden Downs under- and overbark taper equations for diameters and tree volumes for other areas.

DIAMETER

Up. Lim Of X	Underbark Unfert MB (cm)	SEB (cm)	Underbark Fertil MB (cm)	SEB (cm)	Overbark Unfert MB (cm)	SEB (cm)	Overbark Fertil MB (cm)	SEB (cm)	n Unf	n Frt
PIGEON VALLEY										
Stmp	-0.31	0.10	-0.13	0.14	-0.21	0.10	-0.16	0.15	140	129
0.1	-0.71	0.07	-0.39	0.06	-0.40	0.06	-0.61	0.05	164	236
0.2	-0.36	0.08	-0.40	0.07	-0.39	0.07	-0.76	0.06	142	121
0.3	-0.08	0.07	-0.16	0.08	-0.07	0.06	-0.38	0.07	142	115
0.4	-0.30	0.08	-0.35	0.09	-0.27	0.07	-0.59	0.09	114	94
0.5	-0.23	0.07	-0.50	0.10	-0.21	0.06	-0.77	0.10	150	113
0.6	-0.47	0.08	-0.54	0.12	-0.54	0.08	-0.83	0.12	121	101
0.7	-0.31	0.10	-0.62	0.18	-0.46	0.10	-1.05	0.13	105	124
0.8	0.00	0.11	-0.16	0.11	-0.23	0.11	-0.52	0.12	92	118
0.9	0.36	0.11	0.43	0.10	0.28	0.11	0.20	0.10	66	90
1.0	1.42	0.24	1.68	0.27	1.61	0.25	1.78	0.29	17	28
Tot.	-0.27	0.03	-0.26	0.03	-0.25	0.03	-0.51	0.03	1253	1269
MOTUEKA										
Stmp	-0.19	0.09	-0.64	0.20	-0.35	0.10	-0.63	0.23	143	26
0.1	-0.01	0.06	-0.14	0.10	-0.16	0.06	-0.33	0.11	124	30
0.2	0.11	0.06	0.01	0.10	-0.06	0.06	-0.12	0.10	112	20
0.3	0.17	0.06	0.54	0.10	-0.03	0.07	0.33	0.09	100	21
0.4	0.24	0.06	0.11	0.16	0.08	0.06	0.01	0.17	109	20
0.5	0.14	0.05	0.45	0.17	-0.02	0.06	0.33	0.19	114	25
0.6	0.05	0.07	-0.04	0.29	-0.12	0.07	-0.23	0.32	113	16
0.7	0.01	0.07	0.17	0.28	-0.16	0.07	-0.03	0.30	99	15
0.8	0.04	0.07	-0.31	0.32	-0.09	0.08	-0.51	0.35	112	14
0.9	0.38	0.10	0.18	0.29	0.34	0.11	0.09	0.32	45	9
1.0	1.47	0.73	2.95	--	1.62	0.75	3.12	--	4	1
Tot.	0.07	0.02	0.03	0.06	-0.08	0.02	-0.10	0.07	1075	197
HARAKEKE(All trees)										
Stmp	-0.29	0.19	-0.17	0.23	-0.16	0.20	-0.50	0.23	63	57
0.1	-0.41	0.12	-0.42	0.13	-0.09	0.09	-0.56	0.11	91	93
0.2	-0.21	0.11	-0.16	0.11	-0.20	0.09	-0.32	0.07	74	71
0.3	-0.17	0.11	0.14	0.09	-0.05	0.12	0.06	0.09	53	65
0.4	-0.46	0.16	-0.11	0.11	-0.32	0.14	0.05	0.14	58	48
0.5	-0.84	0.17	-0.22	0.10	-0.67	0.12	-0.29	0.12	58	60
0.6	-0.90	0.17	-0.44	0.12	-0.90	0.15	-0.63	0.15	60	49
0.7	-0.64	0.13	-0.10	0.13	-0.65	0.12	-0.25	0.16	57	65
0.8	-0.40	0.13	0.56	0.19	-0.42	0.14	0.49	0.22	60	65
0.9	0.56	0.17	1.45	0.30	0.56	0.20	1.58	0.34	27	38
1.0	2.39	0.33	4.01	0.51	2.86	0.36	4.20	0.61	3	5
Tot.	-0.41	0.05	0.02	0.05	-0.30	0.05	-0.08	0.06	603	615

Table 20. (cont.) Reliability of estimates from the Golden Downs under- and overbark taper equations for diameters and tree volumes for other areas.

DIAMETER

Up. Lim Of X	Underbark Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	Overbark Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	n Unf	Frt
HARAKEKE (Trees less than 29 years old)										
Stmp	-0.26	0.16	-0.25	0.16	-0.54	0.16	-0.65	0.16	51	47
0.1	-0.06	0.08	0.08	0.08	-0.22	0.07	-0.29	0.08	58	58
0.2	0.04	0.07	0.07	0.06	-0.18	0.06	-0.29	0.05	59	52
0.3	-0.07	0.10	0.25	0.08	-0.20	0.08	-0.04	0.08	43	50
0.4	-0.22	0.17	-0.02	0.13	-0.37	0.17	-0.26	0.13	47	33
0.5	-0.30	0.11	-0.25	0.10	-0.42	0.11	-0.51	0.10	45	49
0.6	-0.45	0.12	-0.60	0.13	-0.61	0.12	-0.95	0.14	47	38
0.7	-0.29	0.11	-0.30	0.12	-0.42	0.11	-0.65	0.13	42	50
0.8	-0.34	0.14	-0.07	0.13	-0.50	0.14	-0.34	0.14	40	42
0.9	0.15	0.19	0.34	0.27	-0.01	0.22	0.09	0.32	9	11
1.0	--	--	--	--	--	--	--	--	0	0
Totl	-0.20	0.04	-0.10	0.04	-0.37	0.04	-0.42	0.04	441	430
RABBIT ISLAND										
Stmp	-0.83	0.18	-0.68	0.21	-0.79	0.19	-0.18	0.23	39	37
0.1	-0.36	0.08	-0.77	0.08	-0.66	0.05	-0.70	0.07	73	74
0.2	0.02	0.06	-0.90	0.16	-0.49	0.06	-1.17	0.16	39	22
0.3	0.10	0.12	-0.28	0.19	-0.16	0.11	-0.33	0.19	27	17
0.4	0.35	0.13	0.16	0.18	0.21	0.13	0.33	0.19	25	18
0.5	0.27	0.11	-0.12	0.19	0.18	0.10	-0.03	0.17	42	16
0.6	0.28	0.10	0.13	0.15	0.20	0.10	0.17	0.16	48	29
0.7	0.14	0.10	0.27	0.11	0.06	0.11	0.25	0.12	62	27
0.8	0.28	0.10	0.25	0.16	0.22	0.10	0.25	0.17	58	31
0.9	0.67	0.07	0.80	0.10	0.70	0.09	0.88	0.12	44	28
1.0	--	--	1.64	0.23	--	--	1.83	0.26	0	4
Totl	0.07	0.04	-0.19	0.06	-0.07	0.04	-0.11	0.06	457	303

VOLUME

	MB (m^3)	SEB (m^3)	t value	Max. Resid. (m^3)	SE%	Mean Volume (m^3)	n
PIGEON VALLEY							
			Underbark				
Unfert	-0.0135	0.0031	-4.302**	0.0983	1.56	0.2003	172
Fertil	-0.0185	0.0035	-5.256**	0.1112	0.83	0.4226	165
			Overbark				
Unfert	-0.0156	0.0028	-5.579**	0.0910	1.17	0.2401	172
Fertil	-0.0345	0.0036	-9.536**	0.1317	0.73	0.4926	165

Table 20. Reliability of estimates from the Golden Downs (cont.) under- and overbark taper equations for diameters and tree volumes for other areas.

	MB (m^3)	SEB (m^3)	VOLUME t value	Max. Resid. (m^3)	SE%	Mean Volume (m^3)	n
MOTUEKA							
			Underbark				
Unfert	0.0017	0.0006	3.005**	0.0173	0.77	0.0714	180
Fertil	0.0012	0.0026	0.475	0.0283	1.98	0.1317	30
			Overbark				
Unfert	-0.0002	0.0006	-0.284	0.0168	0.66	0.0834	180
Fertil	-0.0028	0.0035	-0.808	0.0378	2.26	0.1531	30
HARAKEKE (All trees)							
			Underbark				
Unfert	-0.0289	0.0089	-3.236**	0.1835	2.54	0.3517	79
Fertil	-0.0044	0.0044	-1.001	0.0848	1.02	0.4337	77
			Overbark				
Unfert	-0.0131	0.0042	-3.107**	0.0861	0.95	0.4417	79
Fertil	0.0022	0.0052	0.424	0.0984	0.99	0.5248	77
HARAKEKE (Trees less than 29 years old)							
			Underbark				
Unfert	-0.0043	0.0015	-2.875**	0.0278	1.59	0.0948	66
Fertil	-0.0019	0.0011	-1.702	0.0197	0.93	0.1232	63
			Overbark				
Unfert	-0.0074	0.0016	-4.650**	0.0318	1.43	0.1113	66
Fertil	-0.0086	0.0014	-5.951**	0.0305	1.02	0.1410	63
RABBIT ISLAND							
			Underbark				
Unfert	0.0001	0.0021	0.068	0.0315	1.18	0.1787	51
Fertil	-0.0101	0.0034	-2.919**	0.0520	1.07	0.3225	45
			Overbark				
Unfert	-0.0027	0.0023	-1.211	0.0342	1.07	0.2108	51
Fertil	-0.0083	0.0037	-2.228*	0.0542	0.95	0.3893	45

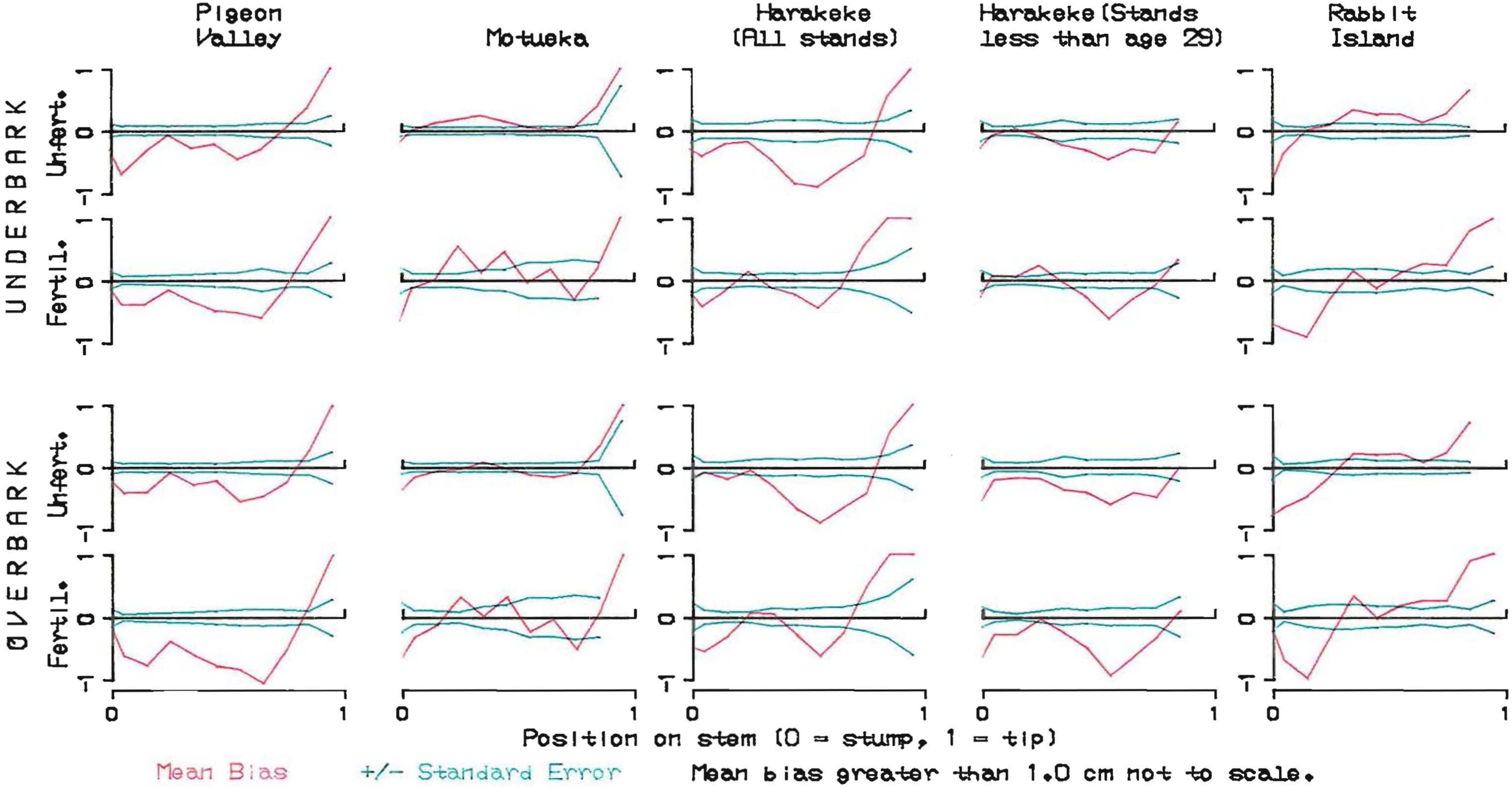


Fig. 17. Graphical depiction of reliability of estimates of diameter as presented in Table 20.

Downs volume estimating system. This overestimation is particularly noticeable in Pigeon Valley but is also evident to a lesser extent on other areas as is the loss of precision. The reason for this is apparent from the values for diameter in Table 20 and Fig. 17: the lower portion of the stem (where there is most volume) is generally overestimated while the upper portion of the stem is either also overestimated, or only slightly underestimated. By contrast, for Golden Downs trees the Golden Downs equations estimated the diameter of the lower portion of stems reasonably well but overestimated the upper portion (see Table 8 and Fig. 12).

There are exceptions to the relatively consistent volume overestimation demonstrated in Table 20, however. Volumes of unfertilized trees in Rabbit Island are estimated with no statistically significant bias and relatively good precision, but the bias for diameter shows that the reason for this is most likely that overestimates of diameter at the stump end are compensated for by underestimates in the upper portions of the stem. Estimates of volumes of fertilized trees in Harakeke also appear somewhat exceptional with mean bias being non-significant except for the case of fertilized trees less than 29 years old. However, the sign and magnitude of the mean bias for diameter is extremely variable along the length of the stem implying that estimates of sectional volumes for Harakeke are also likely to be extremely variable. Motueka would appear to be the only area for which estimates of both diameter and volume from the Golden Downs taper equations are reasonably adequate; diameter is estimated reasonably well for all cases, even underbark volumes of unfertilized trees, the only instance for Motueka for which mean bias is significant.

Although this discussion of Table 20 and Fig. 17 has suggested that much of the stand volume overestimation and imprecision in Table 19 has been due to the Golden Downs taper equations, it remains to be seen how much of this problem can be eliminated by producing and using taper equations for each area. Consequently, taper equations for each area were fitted using the 20% subset of sectional measurements reserved from evaluation.

The taper equations that were fitted for each area are (Table 21 presents coefficient values and regression statistics for reference):

PIGEON VALLEY

$$\left(\frac{dub}{D}\right)^2 = \left(b_1 + b_2\left(\frac{1}{D}\right)\right)X + b_3X^2 + b_4X^4\ln(Dh) + b_5X^5\ln(D) \quad (21)$$

$$\left(\frac{dob}{D}\right)^2 = b_1(D) + b_2X^2 + b_3X^3 + b_4X^4\ln(Dh) + b_5X^5\ln(D) \quad (22)$$

MOTUEKA

$$\left(\frac{dub}{D}\right)^2 = b_1X + b_2\left(\frac{X^2}{h}\right) + \left(b_3\left(\frac{1}{h}\right) + b_4\ln(D)\right)X^5 \quad (23)$$

$$\left(\frac{dob}{D}\right)^2 = b_1\left(\frac{X}{h}\right) + b_2X^2 + b_3\left(\frac{X^3}{Dh}\right) + b_4X^4\ln(Dh) + \left(b_5\left(\frac{1}{D}\right) + b_6\ln(Dh)\right)X \quad (24)$$

HARAKEKE

$$\left(\frac{dub}{D}\right)^2 = b_1X^2 + b_2X^3\ln(Dh) + b_3X^5\ln(D) \quad (25)$$

$$\left(\frac{dob}{D}\right)^2 = b_1\left(\frac{X}{D}\right) + b_2X^2 + b_3X^5 \quad (26)$$

RABBIT ISLAND

$$\left(\frac{dub}{D}\right)^2 = b_1\left(\frac{X}{D}\right) + b_2X^2 + b_3X^3\ln(Dh) + b_4X^4D \quad (27)$$

$$\left(\frac{dob}{D}\right)^2 = b_1X + b_2X^2\ln(D) + b_3X^4D + b_4X^5D \quad (28)$$

Equs. 21 to 28 were then used to estimate the diameters of the remaining 80% subset of sectional measurements for a given area and integrated to estimate tree volume for each sectionally measured tree in the area under consideration. Estimates of diameter and tree volume for each area were then compared to actual values for both sets of taper equations and residuals calculated and analyzed as before. Table 22 present the results of the analysis of residuals for diameter and volume for each area and Fig. 18 graphically summarizes the results of the diameter analysis.

The values for volume in Table 22 show that much of the overestimation, and the loss of precision to a lesser extent, has been eliminated by Equs. 21 to 28. Percent standard error is generally only slightly less in Table 22 than Table 20, but in many cases the maximum residual is considerably less in Table 22, and in most cases, not only is mean bias statistically non-significant in Table 22, but the absolute mean bias has also decreased. This is particularly true for Pigeon Valley and younger trees in Harakeke. Pigeon Valley and Harakeke are also the two areas for which estimates of diameter along the length of the stem have improved most as shown by comparing Fig. 18 and Table 22 with Fig. 17 and Table 20.

However, in some cases, estimates of both diameter

Table 21. Values of coefficients and regression statistics for taper equations for other areas.

Equ.	b_1	b_2	b_3	b_4	b_5	b_6
PIGEON VALLEY						
(21)	0.15331	1.01536	1.35155	-0.45514	0.69289	
(22)	3.38193	1.79075	-0.72193	-0.40256	0.79972	
MOTUEKA						
(23)	0.42091	7.17144	-4.14236	0.13943		
(24)	2.77967	1.77029	10.83217	-0.75546	-6.18945	0.71215
HARAKEKE						
(25)	1.95820	-0.27653	0.22273			
(26)	4.29897	0.83963	0.24812			
RABBIT ISLAND						
(27)	8.65766	0.74422	-0.13094	0.02814		
(28)	0.38062	0.55497	-0.25638	0.22451		

Equ.	R^2	SE_r (cm)	n	Min. abs. t value of any b_i
PIGEON VALLEY				
(21)	0.986	0.0760	638	4.243
(22)	0.989	0.0841	638	7.085
MOTUEKA				
(23)	0.979	0.1080	318	8.620
(24)	0.982	0.1223	318	5.030
HARAKEKE				
(25)	0.983	0.0867	310	9.597
(26)	0.987	0.0946	310	6.123
RABBIT ISLAND				
(27)	0.990	0.0613	188	4.222
(28)	0.990	0.0766	188	5.485

Table 22. Reliability of estimates from the under- and over-bark taper equations for each area for diameters and tree volumes for each area.

DIAMETER

Up. Lim. of X	Underbark Unfert MB (cm)	Underbark Unfert SEB (cm)	Underbark Fertil MB (cm)	Underbark Fertil SEB (cm)	Overbark Unfert MB (cm)	Overbark Unfert SEB (cm)	Overbark Fertil MB (cm)	Overbark Fertil SEB (cm)	n Unf	n Frt
PIGEON VALLEY										
Stmp	-0.02	0.10	0.47	0.15	0.28	0.10	0.50	0.14	140	129
0.1	-0.16	0.06	0.23	0.06	0.08	0.06	-0.17	0.05	164	236
0.2	0.01	0.05	0.19	0.07	-0.13	0.05	-0.40	0.06	142	121
0.3	0.14	0.05	0.34	0.09	0.11	0.05	0.07	0.07	142	115
0.4	0.03	0.05	0.19	0.09	0.09	0.05	0.15	0.10	114	94
0.5	0.03	0.06	-0.12	0.10	0.14	0.05	0.00	0.10	150	113
0.6	-0.29	0.08	-0.25	0.12	-0.14	0.07	0.00	0.13	121	101
0.7	-0.23	0.10	-0.55	0.12	-0.04	0.09	-0.25	0.12	105	124
0.8	-0.17	0.12	-0.48	0.12	0.16	0.10	-0.09	0.12	92	118
0.9	-0.34	0.14	-0.49	0.11	0.19	0.11	0.12	0.10	66	90
1.0	-0.54	0.27	-0.60	0.24	0.37	0.22	0.42	0.22	17	28
Totl	-0.08	0.02	-0.02	0.03	0.07	0.02	-0.01	0.03	1253	1269
MOTUEKA										
Stmp	0.37	0.08	-0.30	0.21	0.20	0.10	-0.47	0.25	143	26
0.1	-0.04	0.05	-0.22	0.11	0.02	0.05	-0.20	0.11	124	30
0.2	-0.17	0.05	-0.45	0.12	0.00	0.04	-0.13	0.10	112	20
0.3	-0.03	0.06	0.01	0.13	0.06	0.06	0.17	0.12	100	21
0.4	-0.02	0.06	-0.15	0.15	-0.02	0.06	-0.06	0.15	109	20
0.5	0.06	0.07	0.32	0.16	-0.09	0.07	0.22	0.17	114	25
0.6	0.11	0.07	-0.12	0.24	-0.11	0.07	-0.36	0.26	113	16
0.7	-0.05	0.08	-0.04	0.28	-0.19	0.09	-0.20	0.30	99	15
0.8	-0.07	0.07	-0.85	0.38	-0.04	0.08	-0.66	0.38	112	14
0.9	-0.35	0.12	-0.99	0.35	0.10	0.12	-0.24	0.35	45	9
1.0	0.44	0.87	2.99	--	1.18	0.75	3.20	--	4	1
Totl	0.01	0.02	-0.20	0.06	-0.00	0.02	-0.15	0.07	1074	196
HARAKEKE(All trees)										
Stmp	-0.06	0.24	0.26	0.25	0.26	0.15	0.31	0.21	63	57
0.1	-0.03	0.14	0.47	0.18	-0.77	0.16	-0.54	0.12	91	93
0.2	-0.15	0.12	0.30	0.16	-0.88	0.15	-0.84	0.11	74	71
0.3	0.07	0.17	0.59	0.15	-0.33	0.10	-0.21	0.09	53	65
0.4	0.20	0.18	0.83	0.22	0.09	0.16	0.72	0.20	58	48
0.5	0.08	0.11	0.57	0.18	0.56	0.15	0.92	0.25	58	60
0.6	0.16	0.13	0.60	0.23	0.89	0.22	1.37	0.37	60	49
0.7	0.44	0.12	0.84	0.19	1.31	0.25	1.63	0.33	57	65
0.8	0.49	0.13	1.35	0.22	1.42	0.26	2.33	0.38	60	65
0.9	0.75	0.15	1.48	0.29	1.99	0.29	2.88	0.39	27	38
1.0	0.45	0.45	1.80	0.89	1.88	0.26	2.75	0.65	3	5
Totl	0.14	0.05	0.70	0.07	0.29	0.07	0.70	0.09	604	616

Table 22. (cont.) Reliability of estimates from the under- and over-bark taper equations for each area for diameters and tree volumes for each area.

DIAMETER

Up. Lim. of X	Underbark Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	Overbark Unfert MB (cm)	SEB (cm)	Fertil MB (cm)	SEB (cm)	n Unf	Frt
HARAKEKE(Trees less than 29 years old)										
Stmp	-0.24	0.17	-0.19	0.16	0.19	0.17	0.17	0.17	51	47
0.1	-0.17	0.08	-0.01	0.08	0.05	0.08	-0.00	0.08	58	58
0.2	-0.14	0.07	-0.10	0.06	-0.28	0.06	-0.36	0.05	59	52
0.3	-0.24	0.10	0.12	0.08	-0.32	0.08	-0.12	0.07	43	50
0.4	-0.14	0.18	0.07	0.13	-0.20	0.17	0.02	0.11	47	33
0.5	-0.03	0.11	0.03	0.10	0.16	0.10	0.11	0.08	45	49
0.6	-0.02	0.12	-0.15	0.13	0.17	0.10	0.07	0.10	47	38
0.7	0.22	0.12	0.22	0.13	0.34	0.09	0.28	0.09	42	50
0.8	0.18	0.14	0.44	0.14	0.17	0.11	0.33	0.12	40	42
0.9	0.54	0.20	0.76	0.27	0.33	0.16	0.58	0.28	9	11
1.0	--	--	--	--	--	--	--	--	0	0
Totl	-0.06	0.04	0.06	0.04	0.03	0.04	0.06	0.03	440	429
RABBIT ISLAND										
Stmp	-0.24	0.18	-0.20	0.22	-0.57	0.19	-0.16	0.23	39	37
0.1	-0.19	0.08	-0.60	0.08	-0.27	0.05	-0.13	0.07	73	74
0.2	-0.26	0.07	-0.80	0.16	-0.08	0.07	-0.19	0.14	39	22
0.3	-0.20	0.11	0.13	0.20	0.20	0.12	0.91	0.23	27	17
0.4	0.21	0.11	0.65	0.20	0.32	0.14	0.68	0.22	25	18
0.5	0.06	0.09	0.86	0.16	0.02	0.11	-0.07	0.16	42	16
0.6	0.10	0.09	0.79	0.14	-0.19	0.11	-0.31	0.16	48	29
0.7	-0.32	0.10	0.47	0.09	-0.52	0.12	-0.74	0.15	62	27
0.8	-0.53	0.09	-0.09	0.15	-0.56	0.13	-0.93	0.18	58	31
0.9	-0.57	0.07	-0.35	0.09	-0.36	0.11	-0.75	0.16	44	28
1.0	--	--	0.02	0.21	--	--	0.11	0.34	0	4
Totl	-0.22	0.03	-0.06	0.05	-0.26	0.04	-0.23	0.06	457	303

VOLUME

	MB (m^3)	SEB (m^3)	value	Max. Resid. (m^3)	SE%	Mean Volume (m^3)	n
PIGEON VALLEY							
			Underbark				
Unfert	-0.0020	0.0019	1.026	0.0574	0.96	0.2003	172
Fertil	0.0018	0.0033	-0.550	0.0953	0.77	0.4226	165
			Overbark				
Unfert	0.0016	0.0016	1.020	0.0475	0.66	0.2401	172
Fertil	-0.0003	0.0031	-0.101	0.0890	0.62	0.4926	165

Table 22. (cont.) Reliability of estimates from the under- and over-bark taper equations for each area for diameters and tree volumes for each area.

VOLUME

	MB (m^3)	SEB (m^3)	value	Max. Resid. (m^3)	SE%	Mean Volume (m^3)	n
MOTUEKA							
			Underbark				
Unfert	-0.0003	0.0006	-0.512	0.0186	0.85	0.0714	180
Fertil	-0.0028	0.0030	-0.947	0.0324	2.25	0.1317	30
			Overbark				
Unfert	0.0003	0.0006	0.561	0.0188	0.74	0.0834	180
Fertil	-0.0016	0.0032	-0.487	0.0351	2.12	0.1531	30
HARAKEKE(All trees)							
			Underbark				
Unfert	0.0147	0.0091	1.619	0.1778	2.58	0.3517	79
Fertil	0.0489	0.0163	3.007**	0.3269	3.75	0.4337	77
			Overbark				
Unfert	0.0073	0.0064	1.145	0.1234	1.44	0.4417	79
Fertil	0.0402	0.0122	3.296**	0.2476	2.32	0.5248	77
HARAKEKE(Trees less than 29 years old)							
			Underbark				
Unfert	-0.0023	0.0015	-1.518	0.0272	1.62	0.0949	66
Fertil	0.0006	0.0011	0.574	0.0190	0.91	0.1232	63
			Overbark				
Unfert	-0.0007	0.0012	-0.601	0.0202	1.04	0.1113	66
Fertil	0.0003	0.0010	0.307	0.0168	0.70	0.1410	63
RABBIT ISLAND							
			Underbark				
Unfert	-0.0022	0.0019	-1.161	0.0291	1.08	0.1787	51
Fertil	0.0024	0.0031	0.770	0.0431	0.96	0.3225	45
			Overbark				
Unfert	-0.0027	0.0025	-1.105	0.0372	1.17	0.2108	51
Fertil	-0.0009	0.0033	-0.275	0.0456	0.85	0.3893	45

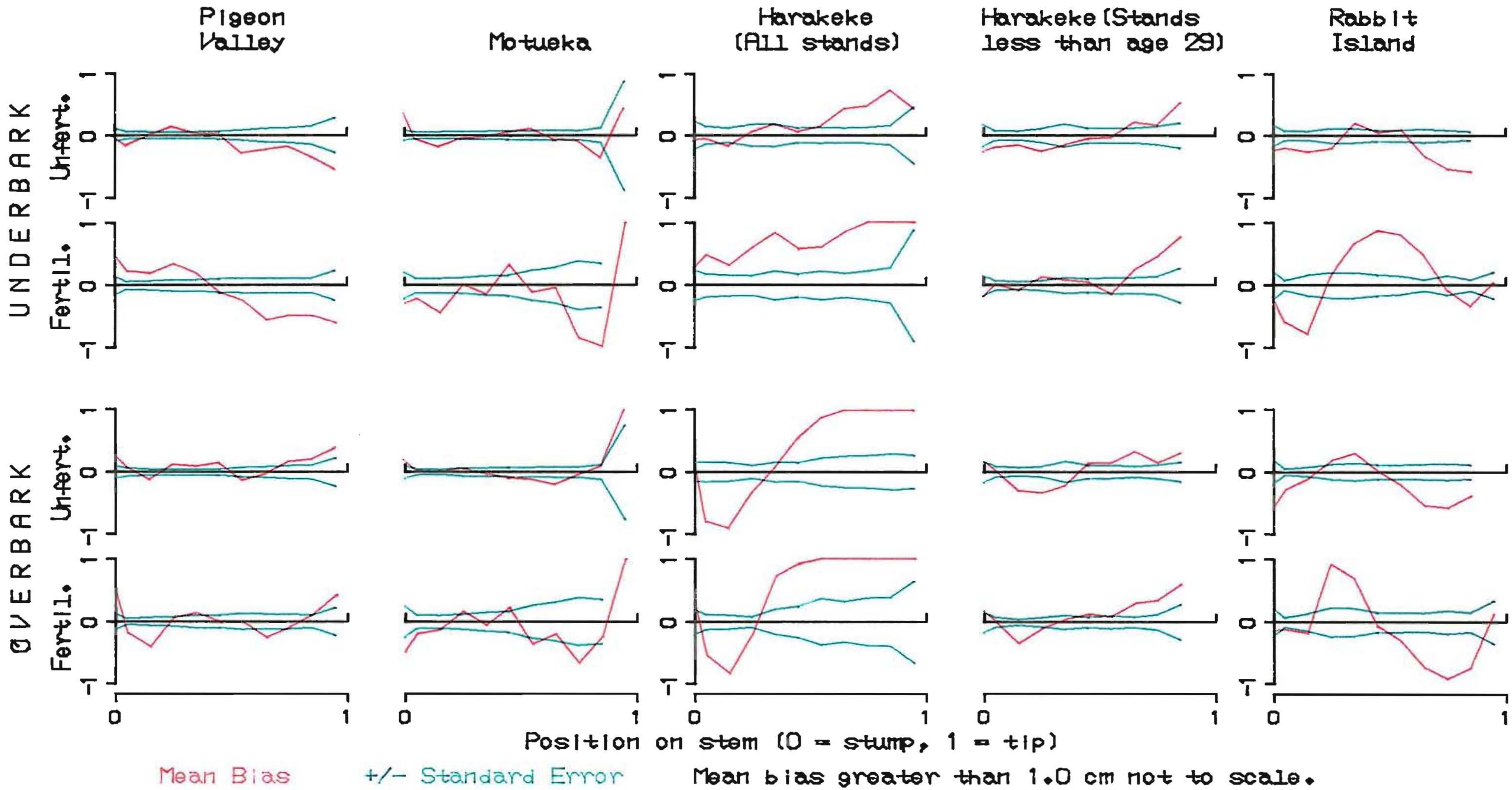


Fig. 18. Graphical depiction of reliability of estimates of diameter as presented in Table 22.

and volume have not improved or have actually deteriorated by using Equs. 21 to 28. For Motueka, the only apparent improvement in estimates of diameter and volume from Equs. 23 and 24, as opposed to estimates from the Golden Downs equations (15 and 16), is that the highly significant mean bias for underbark volumes of unfertilized trees has been eliminated; otherwise, accuracy and precision are approximately the same for either set of equations. In addition to estimates for Motueka showing no improvement using Equs. 23 and 24, estimates of both diameter and volume for fertilized trees in Harakeke have worsened using Equs. 25 and 26. This is most likely caused by the gap in tree size in the data for Harakeke. It is likely that not enough information was available in the data to allow the fitting of an equation flexible enough for both old and young unfertilized and fertilized trees. However, the significant mean bias and relatively high percent standard errors are not actually of great concern because, as was the case for Golden Downs, it is unlikely that stands in Harakeke will be fertilized after age 25. Consequently, it is not likely that an equation for Harakeke will need to be flexible enough to estimate the diameters and volumes of trees fertilized at age 29. After Harakeke, the remaining area for which estimates of tree volume have deteriorated or stayed approximately the same using the equations for a particular area instead of the Golden Downs equations is for fertilized trees in Rabbit Island. Figs. 17 and 18 show that neither the Golden Downs equations (15 and 16) nor the Rabbit Island equations (27 and 28) describe tree shape very adequately. However, the

Rabbit Island equations do tend to give more accurate and precise estimates of stem volume for fertilized trees than do the Golden Downs equations as shown by Tables 20 and 22.

From the preceding discussion of Tables 20 and 22 and Figs. 17 and 18, it is apparent that much of the overestimation and lack of precision evident for stand volumes in Table 19 is due to the inapplicability to trees in the other four areas of the Golden Downs taper equations. It is doubtful, however, that this is the only source of these problems. Consequently, it is necessary to examine the two remaining components of the Golden Downs volume estimating system.

(2) Tree Height Equations

The second component of the system examined was the Golden Downs tree height equation (20). To evaluate this equation, the heights of sectionally measured trees on each area were estimated by the Golden Downs equation. Estimated heights were than compared to actual measurements and residuals were calculated and analyzed. Table 23 presents the results of this analysis.

Table 23 shows that, except for Rabbit Island, the Golden Downs height equation contributes siginificantly to the overestimation of stand volumes, and, for all areas, to the lack of precision of stand volume estimates including Rabbit Island. Both the absolute mean bias and percent standard error for all areas in Table 23 are higher than for Golden Downs (see Table 9), and the negative mean bias in Table 23 is consistently highly significant. Though it does

Table 23. Reliability of estimates from the Golden Downs tree height equation for trees in other areas.

	MB (m)	SEB (m)	t value	Max. Resid. (m)	SE%	Mean Height (m)	n
PIGEON VALLEY							
Unfert.	-0.85	0.102	-8.298**	3.62	0.78	13.11	172
Fertil.	-0.36	0.120	-3.023**	3.59	0.65	18.43	165
MOTUEKA							
Unfert.	-0.71	0.117	-6.076**	3.93	1.24	9.41	180
Fertil.	-1.33	0.111	-4.149**	4.38	2.72	11.79	30
HARAKEKE (All trees)							
Unfert.	-1.27	0.178	-7.174**	4.41	1.18	15.04	79
Fertil.	-0.89	0.152	-5.849**	3.47	0.94	16.19	77
HARAKEKE (Trees less than 29 years old)							
Unfert.	-1.06	0.137	-7.715**	3.30	1.24	11.07	66
Fertil.	-0.71	0.121	-5.866**	2.54	0.96	12.50	63
RABBIT ISLAND							
Unfert.	0.28	0.159	1.734	2.45	1.00	15.90	51
Fertil.	0.41	0.180	2.276*	2.63	0.91	19.66	45

not appear that the Golden Downs tree height equation (20) contributes to the overestimation of stand volume for Rabbit Island, it does seem that Equ. 20 is a partial cause of the lack of precision; stand and tree volumes in Rabbit Island tend to be overestimated by the Golden Downs equations, but the Golden Downs tree height equation tends to underestimate tree height.

As was the case with the taper equations, to determine how much of the loss of accuracy and precision in Table 23 could be eliminated, it was necessary to develop tree height equations for each area. However, to develop a tree height equation of the form of the Golden Downs tree height equation (20) required that diameter distribution equations be developed first in order to obtain estimates of the relative position of each tree in its diameter distribution. Consequently, equations to estimate minimum dbhob, mean dbhob, and the variance of the dbhob distribution for each area were fitted using the P.S.P. measurements for a given area. The equations that resulted for each area are (Table 24 presents coefficient values and regression statistics for reference):

PIGEON VALLEY

$$\text{Dmin} = b_1\left(\frac{1}{N}\right) + b_2\left(\frac{G}{N}\right) \tag{29}$$

$$\text{Dmean} = b_1\ln(G) + b_2N + b_3\left(\frac{1}{N}\right) + b_4\left(\frac{G}{N}\right) \tag{30}$$

$$\text{Dvar} = G(b_0 + b_1A_p) \tag{31}$$

MOTUEKA

$$\text{Dmin} = b_1\ln(G) + b_2G \tag{32}$$

$$\text{Dmean} = b_1\ln(G) + b_2\left(\frac{G}{N}\right) + b_3\left(\frac{1}{G}\right) + b_4A_p \tag{33}$$

$$\text{Dvar} = b_1A_p + b_2\ln\left(\frac{G}{N}\right) \tag{34}$$

HARAKEKE

$$Dmin = b_1 ln(G) + b_2 N + b_3 S \qquad (35)$$

$$Dmean = b_1 G + b_2 (\tfrac{1}{N}) + b_3 (\tfrac{1}{G}) + b_4 (\tfrac{N}{G}) \qquad (36)$$

$$Dvar = G(b_0 + b_1 (\tfrac{1}{N}) + b_2 ln(S)) \qquad (37)$$

RABBIT ISLAND

$$Dmin = b_1 A_p + b_2 (\tfrac{1}{G}) \qquad (38)$$

$$Dmean = b_1 (\tfrac{G}{N}) + b_2 ln(N) + b_3 (\tfrac{N}{G}) + b_4 (\tfrac{1}{G}) \qquad (39)$$

$$Dvar = b_1 G \qquad (40)$$

These were then used with a Weibull function to estimate diameter distributions for each stand. These distributions were then used to calculate the relative position of each sectionally measured tree in its diameter distribution (RelD). Using the relative diameters of each tree, a tree height equation was fitted for each area. The equations that resulted are (Table 25 presents coefficient values and regression statistics for reference):

PIGEON VALLEY

$$h = H(b_0 + b_1 ln(RelD + 1) + b_2 NA_p + b_3 (\tfrac{S}{A})) \qquad (41)$$

MOTUEKA

$$h = H(b_0 + b_1 ln(RelD + 1)) \qquad (42)$$

HARAKEKE

$$h = H(b_0 + b_1 ln(RelD + 1)) \qquad (43)$$

RABBIT ISLAND

$$h = H(b_0 + b_1 ln(RelD + 1)) \qquad (44)$$

As was done before, to evaluate each of these equations, as was done before, the equation for a given area was used to estimate the heights of the sectionally measured trees for that area, estimates were compared to actual measurements, and residuals calculated and analyzed. Table 26 presents

Table 24. Coefficients and regression statistics for diameter distribution equations for other areas.

Equ.	b_0	b_1	b_2	b_3	b_4	R^2	SE_r
PIGEON VALLEY							
(29)		3840.2	84.312			0.953	3.17
(30)		4.5202	-0.00243	1792.3	143.28	0.999	0.43
(31)	-0.09736	0.07884				0.342	0.63
MOTUEKA							
(32)		2.5923	0.24603			0.985	1.16
(33)		4.5457	183.96	4.6428	-0.05175	0.999	0.11
(34)		1.2587	1.1170			0.909	2.17
HARAKEKE							
(35)		3.8914	-0.01296	0.31213		0.977	1.99
(36)		0.40578	7496.9	-49.766	0.05290	0.999	0.68
(37)	-49.692	4790.2	6.6659			0.565	0.48
RABBIT ISLAND							
(38)		1.0701	147.34			0.996	1.09
(39)		228.54	2.4396	-0.17219	47.378	0.999	0.06
(40)		0.38363				0.958	1.41

Equs.	n	Min. Abs. t value for any b_i
PIGEON VALLEY		
(29)-(31)	234	9.287
MOTUEKA		
(32)-(34)	105	5.414
HARAKEKE		
(35)-(37)	438	10.895
RABBIT ISLAND		
(38)-(40)	72	11.637

Units for SE_r for equations that estimate minimum and mean dbhob are cm, and cm^2 for equations that estimate the variance of dbhob distributions.

Table 25. Coefficients and regression statistics for tree height equations for other areas.

Equ.	b_0	b_1	b_2	R^2	SE_r (m)	n	Min. abs. t value for any b_i
PIGEON VALLEY			1)	$b_3 = -0.02115$ K.E.L.			
(41)	0.85512	0.39375	-0.67523E-5	0.560	0.86	337	5.709
MOTUEKA							
(42)	0.62561	0.62428		0.581	0.14	210	17.037
HARAKEKE							
(43)	0.42981	0.70974		0.584	0.08	156	14.778
RABBIT ISLAND							
(44)	0.87549	0.23778		0.430	0.06	96	8.521

1) $(-0.67523)10^{-5}$

the results of this analysis.

Comparing values in Table 26 with values in Table 23 shows that the equation for each area has improved the estimates of top height for each area considerably. Although the precision has been improved very little, and actually deteriorated in some cases as measured by percent standard error, using Equs. 41 to 44 instead of the Golden Downs tree height equation (20) has decreased the mean bias of estimates considerably, and, in most cases, the mean bias is statistically non-significant.

It is clear, therefore, that, in addition to the Golden Downs taper equations (15 and 16) contributing to the overestimation of stand volume in Table 19, the Golden Downs height equation is also a factor. However, diameter distribution equations provide yet another component of the system that might also be a cause of the stand volume overestimation.

(3) Diameter Distribution Equations

It was felt to be relatively pointless to evaluate directly the third and final component of the Golden Downs volume estimating system, the diameter distribution equations, by examining how well an equation will estimate the minimum dbhob, mean dbhob, or variance of the dbhob distribution for other areas. It was felt that a more meaningful comparison would be an evaluation of how well volume is estimated using the taper and height equations for a given area in conjunction with the diameter distribution equations. Consequently, the diameter distribution equations for Golden Downs (17 to 19) were used with a Weibull func-

Table 26. Reliability of estimates from the tree height equations for each area.

	MB (m)	SEB (m)	t value	Max. Resid. (m)	SE%	Mean Height (m)	n
PIGEON VALLEY							
Unfert.	-0.21	0.093	-2.248*	2.83	0.71	13.11	172
Fertil.	0.19	0.115	1.653	3.39	0.62	18.43	165
MOTUEKA							
Unfert.	0.19	0.118	1.604	3.65	1.26	9.41	180
Fertil.	0.26	0.446	0.575	4.84	3.78	11.79	30
HARAKEKE(All trees)							
Unfert.	-0.13	0.136	-0.918	2.64	0.91	15.04	79
Fertil.	0.30	0.127	2.346*	2.50	0.79	16.19	77
HARAKEKE(Trees less than 29 years old)							
Unfert.	-0.23	0.135	-1.701	2.40	1.22	11.07	66
Fertil.	0.23	0.112	2.013*	1.95	0.90	12.50	63
RABBIT ISLAND							
Unfert.	0.01	0.157	0.077	2.34	0.99	15.90	51
Fertil.	-0.07	0.180	-0.369	2.50	0.92	19.66	45

tion to generate diameter distributions for each stand for which sectional measurements had been taken for the area under consideration. These distributions were then used with the taper and tree height equations for each area to estimate stand volume for each area. These estimates of volume were then compared to actual volumes and residuals were calculated and analyzed. Table 27 presents the results of this analysis.

Table 27 shows that Equs. 17 to 19, while not necessarily contributing to the overestimation of stand volume in Table 19, do seem inappropriate for the other areas. In the cases of unfertilized stands in Rabbit Island, young unfertilized stands in Harakeke, and fertilized stands in Motueka, volumes are significantly overestimated, and for unfertilized stands in Pigeon Valley, volumes are significantly underestimated. Furthermore, the precision of estimates of volume for each area is poorer than for estimates of volume for Golden Downs stands as seen by comparing percent standard errors in Tables 10 and 27. This is indicative that the Golden Downs diameter distribution equations cause a loss of precision when used for other areas. Notably however, the standard errors are less in Table 27 than Table 19, except for Harakeke, indicating that, as expected, the use of the taper and height equations for each area (instead of the Golden Downs equations) has improved the precision of volume estimates for each area.

It still remains to determine how well the taper and height equations for each area estimate stand volumes in conjunction with diameter distribution equations for each

Table 27. Reliability of volume estimates using the Golden Downs diameter distribution equations with the taper and tree height equations for each area for stands in other areas.

	MB (m^3/ha)	SEB (m^3/ha)	t value	Max. Resid. (m^3/ha)	SE%	Mean Volume (m^3/ha)	n
PIGEON VALLEY							
			Underbark volume				
Unfert.	2.67	0.99	2.685*	11.98	1.11	89.1	30
Fertil.	2.74	1.86	1.477	20.79	1.19	156.3	30
			Overbark volume				
Unfert.	5.17	2.16	2.393*	25.49	2.01	107.6	30
Fertil.	2.89	2.61	1.107	28.79	1.43	182.8	30
MOTUEKA							
			Underbark volume				
Unfert.	-1.02	0.77	-1.321	9.58	1.49	51.9	36
Fertil.	-10.92	3.54	-3.086*	21.90	3.14	112.5	6
			Overbark volume				
Unfert.	-0.53	0.98	-0.541	11.83	1.61	60.6	36
Fertil.	-10.73	3.67	-2.921*	21.95	2.81	130.7	6
HARAKEKE(All stands)							
			Underbark volume				
Unfert.	5.21	5.91	0.881	59.21	5.55	106.5	26
Fertil.	15.11	9.28	1.628	72.67	5.80	160.1	16
			Overbark volume				
Unfert.	3.39	4.37	0.775	43.63	3.36	130.1	26
Fertil.	14.55	9.27	1.569	72.20	4.82	192.2	16
HARAKEKE(Stands less than 29 years old)							
			Underbark volume				
Unfert.	-3.75	1.49	-2.523*	15.41	3.72	40.0	23
Fertil.	-2.03	1.35	-1.511	9.23	1.93	70.0	13
			Overbark volume				
Unfert.	-3.65	1.23	-2.981**	13.25	2.61	46.9	23
Fertil.	-2.07	1.02	-2.026	7.42	1.27	80.1	13
RABBIT ISLAND							
			Underbark volume				
Unfert.	-4.88	1.09	-4.474**	12.56	1.50	72.7	18
Fertil.	-5.46	3.15	-1.735	18.02	1.72	183.6	9
			Overbark volume				
Unfert.	-4.61	1.57	-2.930**	15.06	1.85	84.9	18
Fertil.	-3.90	3.71	-1.051	19.32	1.67	221.9	9

area. Such equations were developed in the previous section in order to obtain estimates of relative diameter for the fitting of tree height equations. Consequently, Equs. 29 to 40 were used with a Weibull function to generate diameter distributions for each area and the resulting distributions were used in conjunction with the taper and tree height equations for each area to estimate stand volumes for all areas. These estimates were then compared to the actual stand volumes and residuals were calculated and analyzed as before. Table 28 presents the results of this analysis.

Table 28 shows that using the diameter distribution equations for each area (29 to 40) rather than the Golden Downs equations (17 to 19) has improved both the accuracy and precision of stand volume estimates. Though there are some execeptions, the standard errors and percent standard errors are less in Table 28 than Table 27. Furthermore, in most cases there has been a reduction in the maximum residuals in Table 28; generally, this reduction is sizable. Accuracy has also improved as shown by mean bias in Table 28: not only has the absolute mean bias decreased in most cases, but the t values are generally non-significant despite the improved precision. Mean bias is only statistically significant for Motueka but there is no consistency to this bias: underbark volumes of fertilized stands are overestimated, while overbark volumes of unfertilized stands are underestimated. The significant mean bias would be considered alarming if, for example, underbark and overbark volumes for fertilized stands were both underestimated. But, given that the signs of the significant bias in Table

Table 28. Reliability of volume estimates using the diameter distribution, taper, and tree height equations for stands in areas other than Golden Downs.

	MB (m^3/ha)	SEB (m^3/ha)	t value	Max. Resid. (m^3/ha)	SE%	Mean Volume (m^3/ha)	n
PIGEON VALLEY							
			Underbark volume				
Unfert.	-2.26	1.28	-1.767	14.50	1.43	89.1	30
Fertil.	1.39	1.67	0.834	18.20	0.89	156.3	30
			Overbark volume				
Unfert.	-0.65	0.95	-0.684	10.32	0.88	107.6	30
Fertil.	1.11	1.48	0.751	16.17	0.81	182.8	30
MOTUEKA							
			Underbark volume				
Unfert.	2.07	1.10	1.892	13.89	2.11	51.9	36
Fertil.	-4.39	1.27	-3.453*	8.49	1.13	112.5	6
			Overbark volume				
Unfert.	3.02	1.40	2.167*	17.95	2.30	60.6	36
Fertil.	-3.48	1.84	-1.886	8.76	1.41	130.7	6
HARAKEKE(All stands)							
			Underbark volume				
Unfert.	3.32	5.18	0.640	51.53	4.87	106.5	26
Fertil.	14.66	8.46	1.733	66.88	5.28	160.1	16
			Overbark volume				
Unfert.	0.20	2.04	0.099	20.09	1.56	130.1	26
Fertil.	13.03	7.38	1.765	58.54	3.84	192.2	16
HARAKEKE(Stands less than 29 years old)							
			Underbark volume				
Unfert.	-1.04	0.79	-1.313	7.50	1.98	40.0	23
Fertil.	-0.46	0.83	-0.555	5.29	1.19	70.0	13
			Overbark volume				
Unfert.	-0.81	0.92	-0.878	8.53	1.96	46.9	23
Fertil.	-0.50	1.37	-0.366	8.63	1.71	80.1	13
RABBIT ISLAND							
			Underbark volume				
Unfert.	-1.53	1.05	-1.449	8.72	1.45	72.7	18
Fertil.	0.61	3.14	0.193	15.35	1.71	183.6	9
			Overbark volume				
Unfert.	-0.03	1.54	-0.022	11.99	1.81	84.9	18
Fertil.	2.00	3.70	0.542	18.36	1.67	221.9	9

28 are opposite, and that one is for unfertilized stands and one for fertilized stands, this significant mean bias is not considered to be of major concern.

The final point to note from Table 28 concerns the precision of estimates of stand volume for Pigeon Valley. Using all equations for Pigeon Valley, stand volume is estimated more precisely for Pigeon Valley (as seen by percent standard error) than when using all equations for a particular area to estimate stand volumes on any other area, including Golden Downs. Futhermore, estimates of stand volume for Pigeon Valley are statistically non-biased. It is most likely that this is a result of the data for Pigeon Valley covering the widest continuum of tree sizes and stand ages. Other areas generally had very few sectional measurement data or, in the case of Golden Downs, had sectional measurement data that did not cover the entire range of tree sizes uniformly. This is reflected in the relatively poor precision of stand volume estimates in Tables 10 and 28 for all areas save Pigeon Valley. Consequently, it is again apparent that in subsequent studies, an effort should be made to ensure a continuum of coverage in all data.

III. SUGGESTED ADAPTATIONS FOR USE OF THE GOLDEN DOWNS VOLUME ESTIMATING SYSTEM ON OTHER AREAS IN NELSON

From the analysis presented in the first four sections of this chapter, it is apparent that, when the Golden Downs volume estimating system is applied to other areas, it is necessary to adjust the resulting estimates of stand volume before considering them representative of stand volume for another area. One option for this adjustment is simply to use the taper, tree height, and diameter distribution equations developed for each area in place of the Golden Downs equations. If this approach is adopted, however, it must be recognized that in most cases the amount of data used to develop equations for other areas was severely limited; the one exception to this was Pigeon Valley. Consequently, using the equations presented in this chapter that were developed for each area might lead to relatively poor estimates of stand volume except for each area except Pigeon Valley.

A second option for adjusting estimates of stand volumes from the Golden Downs volume estimating system for other areas is to alter directly the estimates of stand volume rather than the individual equations used to obtain those estimates. Therefore, as was done for the growth functions in Chapter 8, tentative adaptations are suggested and are to be used only until more definitive studies for adjusting estimates of volume for other areas can be completed. These suggested adaptations are presented in Table 29. It is emphasized that these rules may not necessarily produce better estimates of stand volume for each area than the first option discussed in the preceding paragraph. Rather, the guidelines presented in Table 29 are simply presented as an alternative to using methodology presented earlier in this chapter to estimate stand volumes for each area. It is noted that these suggestions are to be used independent of the suggested adjustments for stand growth presented in Table 18.

Table 29. Factors to be multiplied by estimates from the Golden Downs volume estimating system for applicability to other areas.

	Unfertilized Stands	Fertilized Stands
Pigeon Valley	0.93	0.945
Motueka	0.945	0.945
Harakeke (Less than age 13)	0.78	0.85
Harakeke (Older than age 13)	0.91	0.94
Rabbit Island	0.975	0.975

For example, if the volume estimating system produces an estimate of 100.0 m^3/ha for an unfertilized stand in Pigeon Valley, the actual estimate should be assumed to be 93.0 m^3/ha.

These rules were developed primarily by examining the mean bias in Table 19 as a percent of the mean value stand volume for each area. For Motueka and Rabbit Island, however, such an approach suggested that volume estimates for fertilized stands should be reduced by more than unfertilized stands. This is hardly likely in actual forest conditions considering that it has been concluded that fertilization decreases tree taper. Consequently, for these two areas, fertilized stands should be reduced by as much as the unfertilized stands. For Harakeke, due to the gap in ages of the data, it was felt necessary to have an adjustment for both "young" and "old" stands. The cut-off of 13 years of age was somewhat arbitrarily selected as approximately half of the suggested rotation age of 25 years; trees less than 13 years are in the first half of their rotation and, therefore, "young", while trees older than 13 years are in the second half of their rotation and, therefore, "old".

Finally, it is stressed again that the suggested adjustments are simply empirical, and are to be replaced eventually by more objective and rigorous quantification based on a more comprehencsive data base. Until that time, they should produce more reliable estimates of stand volume for each of the four areas than would be obtained simply by using the Golden Downs volume estimating system without adjustment.

CHAPTER 10

DISCUSSION AND RECOMMENDATIONS FOR FURTHER STUDY

I. DISCUSSION

The two major objectives stated at the outset of this study were: (1) to develop a methodology compatible with the current growth model for Golden Downs Forest to quantify the response to fertilizer of stand growth and yield of radiata pine crops in that forest; and (2) to evaluate the applicability of this methodology to radiata pine crops in other areas of the Nelson region. The procedures and analysis described in this thesis have achieved these objectives by providing methodology which quanitifies: (1) the growth of fertilized forest stands as accurately and precisely as the original model quantifies the growth of unfertilized forest stands in terms of top height, basal area, and stocking; (2) the effect of fertilization on stand volume by accounting for the resultant change in individual tree shape; and (3) the difference in growth and yield for forested localities in Nelson other than Golden Downs. Furthermore, interim guidelines have been provided to enable the growth and yield methodology developed for Golden Downs to be applied practically to those other areas. Before discussing these points, however, it is first necessary to re-examine the original model as it was the starting point for this study.

The original model is a system of differential equations suggested by Dr. O. Garcia of the Forest Research Institute in Rotorua. Coefficients for the methodology suggested by Dr. Garcia were obtained using maximum-likelihood estimators with data consisting of remeasurements of permanent sample plots of radiata pine crops in Golden Downs State Forest. Within the model, the development over time of top height, basal area, and stocking for any stand proceeds along a certain path which is dependent on the age and site index of a stand. Stand volume is then estimated as a function of top height, basal area, and stocking. The volume equation used in the model was fitted from estimates of volume obtained from a two-dimensional diameter-height regional volume equation. This methodology was critically examined in this study, and the accuracy and precision of estimates of growth (Table 4) and yield (Table 7) for unfertilized stands produced from the original model were used as the standards against which to compare estimates of growth an yield for fertilized stands in Golden Downs, and also estimates for unfertilized and fertilized stands in other localities.

The initial step in fulfilling the objectives of this study was to modify the growth functions of the original model to incorporate the effects of fertilization. The literature reviewed in Chapter 2 suggested that modelling the effect of fertilization on stand growth is a field in which relatively little work has been done. One approach that has been relatively widely adopted (e.g. Ek and Monserud, 1974, Daniels and Burkhart, 1975, and Hegyi, 1974) has been to increase site index after fertilization to reflect the improvement in site quality; this relatively simplistic approach has been adopted in large part due to a lack of data concerning fertilization. Lack of fertilization data was not a major problem in this study; although it is rare for any study to have fully "enough data", numerous data from fertilizer trials established in Nelson from 1968 onwards provided a substantial data base. Consequently, this thesis was not subject to many of the limitations of other studies that were also concerned with modelling the effect of fertilzation on stand growth.

The data in this study suggested that, of the three stand parameters in Dr. Garcia's model (top height, basal area, and stocking), only basal area was affected by fertilization; top height showed no response to fertilization and the effect on stocking was indeterminable. To model basal area response, therefore, an equation containing three distinct factors was developed: (1)time since fertilization, (2)rate of fertilization, and (3)characteristics of the fertilized stand. The first two factors were fitted as separate sub-models using non-linear regression and after each of these two sub-models was derived, they were used in conjunction with stepwise linear regression to select stand characteristics that affect the response of basal area to fertilization. Each factor in the model makes sense biologically; the time factor models basal area response as a sigmoid curve where response will equal zero if zero years have passed since fertilization; the fertilizer rates factor will cause the basal area response to be zero if no nitrogen is applied, and cause an increasing response at a decreasing rate as more nitrogen or phosphorous is applied; the stand factor causes an increasing basal area response the greater the basal area at the time of fertilization, and a decreased response the better the site or the older the stand. Furthermore, because the time factor and fertilizer rate factor of the adjusted model go through the origin, this modification is fully compatible with the original model. The result of this approach was an equation that models fertilizer response as a sigmoid curve over time so that basal area response peaks four years after fertilization; the exact shape of the response curve is defined by the rate of fertilization and the characteristics of the fertilized stand. Four years after fertilization, the growth functions of the original model are used to grow the fertilized stand from then onwards to subsequent ages.

This model was evaluated using data from fertilized stands of fertilizer trials in Golden Downs and was found to produce estimates of basal area growth as accurate and precise as estimates from the original model for unfertilized stands. Furthermore, this model was also evaluated on operationally (aerially) fertilized stands; estimates of growth for operationally fertilized stands were approximately as accurate and precise as estimates for fertilizer trials despite probable wide variation in actual application rates of fertilizer over an entire stand for the operationally fertilized stands.

However, there were three main problems with this model; as explained below, all three were caused by the limitation in range of data available for fitting the model in this study.

The first main problem was caused by the type of fertilizer applied to the stands in the data. Nitrogen, phosphorous, and boron are commonly applied to Golden Downs Forest, but the fertilizer model derived allows for a response only to nitrogen alone, or nitrogen and phosphorous combined. This is because of the lack of fertilizer trials with unfertilized control plots, plots with phosphorous only, boron only, or phosphorous and boron only. This limitation is not as serious as might initially appear; results of many experiments in Nelson (Jacks et al., 1972) suggest that, in Golden Downs, a fertilizer response will not result if nitrogen has not been applied. Nonetheless, it would be useful in the future to have data available to allow the examination of, for example, the effects of nitrogen and boron only, or the effects of nitrogen with a wider range of phosphorous rates.

The second main problem is somewhat akin to the first. Not only were the types and rates of fertilizer somewhat limited, but the range of stands to which fertilizer was applied was limited. For example, though data from fertilizer trials extended to age 20 (excluding trial N261 which was fertilized at age 44), there was not a nitrogen-only trial after age 15. Likewise, it was stated that no height response was evident in the trials used, but in younger stands it is possible that there will be a height response to certain fertilizers in Golden Downs. Though the derived model covers the probable range of stands that can be expected to be fertilized in actual practice in Golden

Downs Forest, it cannot be said that the effects of all likely combinations of fertilizers on all stands that are likely to be fertilized have been examined.

The third main problem with the derived model concerns the length of time over which fertilizer appears to affect stand growth. The data from fertilizer trials in this study only covered a period from fertilization to four years later. Consequently, though it is certainly possible to extend the methodology further by using the growth functions of the original model as was done here, the derived model may only be considered strictly applicable for this time period. Because of this limitation, it cannot be said with absolute certainty what the effect of fertilization over the life of a stand will be, despite this being what is presumably of most concern to a forest manager. It would be desirable in future fertilizer work to have experiments which examine the long-term effect of forest fertilization. Though such experiments are probably not extremely cost-effective, relatively few should be required to confirm or reject the long-term effects of fertilization suggested by the methodology presented in this thesis. (The long-term effects as estimated by the model are depicted graphically in Figs. 9 to 11, and Fig. 14.)

After quantifying the effect of fertilization on basal area growth, it was necessary to quantify the effect on stand volume. Obviously, a stand basal area response will cause a stand volume response, but it is unlikely that a basal area response alone will adequately quantify the full effect of fertilization on volume, as pointed out by

Whyte and Mead (1976). It is well-recognized that fertilizer affects tree shape; numerous studies were reviewed in Chapter 2 which concluded this (e.g. Pegg, 1966, Woollons and Will, 1975, Mitchell and Kellog, 1972). However, methodology concerning how to account for this change of shape for estimating tree volume is relatively scarce. Meng (1981) appears to be one of the few researchers to produce methodology to differentiate between the shape of unfertilized and fertilized trees in order to estimate volumes; he described a tree volume equation that uses a dummy variable for each fertilizer treatment present to implicitly quantify the change in shape caused by fertilization. However, even this methodology was inapplicable in this study because of the need for techniques that quantify the change in shape over a continuum of fertilizer rates, rather than for discrete treatments only.

Consequently, rather than use a volume equation to quantify the difference in shape of unfertilized and fertilized trees, it was decided to examine taper equations, which seek to describe tree shape primarily, and may be integrated for volume as a secondary step. Using sectional measurement data from trees of fertilized stands, a taper equation was developed which describes the profiles of fertilized trees approximately as well as the profiles of unfertilized trees, and which may also be integrated to provide estimates of volume approximately equally accurate and precise for both unfertilized and fertilized trees. The taper equation is then used with a height-diameter function and a Weibull representation of a stand diameter distribution to obtain estimates of stand volume.

There are several advantages of such a system. Of primary interest is that estimates of volume from this system are more accurate and precise than estimates from the two-dimensional regional volume function of the original model, particularly for fertilized stands. Secondly, because it is based on taper equations, tree and stand volume to any diameter or height limit may be estimated. Unfortunately, the accuracy and precision of such estimates could not be evaluated in this study due to the sectional measurement procedure which does not take diameter measurements at fixed heights. Thirdly, the tree height equation is not dependent on actual diameter as is generally the case, but rather is dependent on relative diameter -- i.e. the position of a tree in its diameter distribution. An equation that estimates height based on actual diameter would be likely to produce erroneous results considering that a basal area response, but not a height response, was demonstrated in this thesis. An equation based on relative diameter has no such problems.

As was the case with the adjusted model, however, there was a problem with this volume system that was caused by data limitations. Development of such a volume system requires sectional measurement data from unfertilized and fertilized trees. In this study, such data were relatively abundant for trees aged 6 to 20, but no such data were available between the ages of 20 and 48. This obviously weakens the accuracy and precision of estimates of tree and stand volumes between ages 20 and 48. This should not be seen as a serious limitation, however, because the rotation age in Golden Downs is approximately 25 years; using the developed volume system, therefore, stand volume should therefore only be relatively poorly estimated between ages 20 and 25 years.

After deriving the methodology to estimate both growth and yield for radiata pine stands in Golden Downs, the first objective of this study had been satisfied. The second objective was to evaluate this methodology on four other areas in Nelson: (1)Pigeon Valley, (2)Motueka, (3)Harakeke, and (4)Rabbit Island. In practice, the original model is used for these areas though the applicability of this model for each of these areas has never been examined. Because stand growth data and sectional measurement data for both unfertilized and fertilized stands were available for each of these four other areas, the applicability of both the growth and the volume methodology presented in this thesis to each area was examined.

From this evaluation it was concluded that, though growth and yield methodology for Golden Downs is applicable to other areas in isolated cases, it is generally necessary to adjust estimates from the model to make them applicable to another area. This is particularly true for the volume estimating system for which the applicability of each component of the system to other areas was evaluated. It was concluded that each component of the system needed to be replaced for other areas to ensure reasonable accuracy and precision of estimates. This is hardly surprising considering that each of the four areas is on a soil type different than that of Golden Downs. Consequently, it could be expected that, for example, height growth on Harakeke, or tree shape on Pigeon Valley would be different from Golden Downs.

There were weaknesses in the evaluation of the volume system for other areas similar to those for basal area growth predictions caused by lack of data. Notably, for unfertilized stands in Pigeon Valley, there was a lack of stand remeasurement data. Furthermore, no area had sufficient stand growth or sectional measurement data for fertilized stands to enable a truly adequate evaluation of the effect of fertilizer on stand growth and yield. In subsequent studies, this should be of prime concern since the effects of fertilizer on stand growth and tree shape is likely to be radically different on different soil types; the evaluation of methodology on other areas showed this as well.

After the completion of the evaluation of the applicability of volume methodology to other areas in Nelson, both objectives of this study could be considered satisfied. It is apparent from the foregoing discussion, however, that a number of gaps in the data somewhat limit this study. Rather than identifying these gaps only in the general terms of the preceding discussion, it was felt that it would be useful to enumerate specifically what the gaps are. This may then be used somewhat as a proposed guide to the direction of future studies.

II. RECOMMENDATIONS FOR FURTHER STUDY

The gaps in the data identified earlier make it apparent that separate localities and soil types require individual analysis. Future work should seek to add specific knowledge to individual areas rather than to the region as a homogeneous unit. Specifically, the two types of data that are still most needed are stand or plot growth data from fertilizer trials, and sectional measurements at different ages. The following paragraphs discuss what is needed for stand growth data first, and what is needed for sectional measurements second.

In fertilizer trials used in this study, some trials received initial dressings of elements so that "true" (unfertilized) control plots were not available. This approach potentially confounds analysis as fertilizer response is assessed after an initial deficiency in boron (for most trials here) is corrected; correcting boron deficiency before application of nitrogen and/or phosphorous is currently not a management strategy in Nelson (Gilchrist,D., pers. comm.). Any further fertilizer trials should have unfertilized control plots.

A number of the trials used in this study were thinned and re-fertilized after a number of years (usually four). While this is useful in the sense that each four year period may be considered a separate trial, following this strategy on all trials will never provide information on the long term effects of fertilization. It would be of value to establish a number of trials in Nelson in relatively young stands (age 6 or so) and measure the stands for the following 10 or 20 years without further thinning or fertilization of the stand. A number of questions would be answered this way including the effect of fertilization on mortality and the long-term effect of fertilization on stand volume and tree shape.

Fertilizer trials aside, all of the four areas other than Golden Downs did not have sufficient unfertilized stand data from the P.S.P. system or other sources in order to enable the production of a growth model similar to the original Golden Downs growth model. Pigeon Valley and Rabbit Island were most lacking in this respect and Motueka and Harakeke least lacking. To develop a growth model for each area similar to the one modified in this study, more stand growth data from unfertilized stands is necessary for each area.

For derivation of a volume estimating system such as the one produced in this thesis, it is crucial that sectional measurements be taken on trees covering the range of ages and/or sizes of trees likely to be considered by a user of the model. Furthermore, sectional measurements done on standing trees with a diameter tape should not be mixed with measurements from discs; measurements done both ways were examined for Motueka and diameter estimates at various points on the stem were found to be considerably different. An effort also needs to be made to keep the number of unfertilized and fertilized trees fairly equal in the sectional measurement data set. Experience in this study suggests that a disproportionate number of either will cause the estimation of a taper equation that performs well only for those trees most numerous in the data. Similarly, an effort should be made in future studies to record a diameter measurement near the top tenth of a tree in order to prevent taper equations from describing the base of a tree well but the tip of a tree poorly. This is not critical, however, since most tree volume is in the butt end of the tree, which was described reasonably well by the taper equations developed in this study.

As a summary of this discussion, recommendations for each area are presented in the following paragraphs. It should be recognized that the following recommendations are considered the ideal for a study such as this; the practicality of these suggestions, as well as the relative importance of obtaining the suggested data will have to be critically assessed by the potential users of this and future work.

(1) Golden Downs

For fertilizer trial data, Golden Downs is reasonably complete with trials covering a variety of ages, stockings, and fertilizer rates including those conditions most likely to be encountered in practice. This is not to say that further trials would be redundant. However, any further trials considered must be planned with likely management strategies in mind to ensure usefulness of future work from an operational standpoint.

Sectional measurement data are needed in Golden Downs for trees between the ages of 20 and 35. The trees aged 48 in this study served the purpose of allowing the range of ages from 6 to 48 to be covered but the gap between ages 20 and 48 makes volume estimates somewhat suspect at these ages. It is pointed out, however, that there are few if any radiata pine stands presently older than age 30 or 35 in Golden Downs.

(2) Pigeon Valley

Pigeon Valley is in need of fertilizer trials with more varied rates. Currently, two sites are used which have been thinned and re-fertilized a number of times to provide an abundance of trial data. Unfortunately, the re-fertilizations have been identical to the initial treatments, which do not cover the range of treatments likely to be applied. For Pigeon Valley, it would be desirable to establish more trials on different sites that cover a greater range of treatments.

Pigeon Valley currently has little need for more sectional measurements with ages 6 to nearly 30 already being covered reasonably well. If further trials are put in, sectional measurements should be taken on them, but few gaps in the current sectional measurement data exist; data for older aged trees is the most lacking but this is not a serious problem.

(3) Motueka, Harakeke, Rabbit Island

These areas need many more fertilizer trials, but determining which trials are most needed is far more complex than for Golden Downs. In Golden Downs it is known with reasonable certainty that nitrogen and phosphorous (and sometimes boron) are lacking, and that phosphorous alone will cause little if any response. It is less clear what element(s) are lacking in these three areas and what the effect of various elements and combinations of elements will be. For example, data used in this study suggested that nitrogen causes a negative height response in Rabbit Island; this must surely be examined in subsequent studies. Furthermore, because these areas are all generally poorer, less productive sites than Golden Downs, the difference between the effects of fertilizer in Golden Downs and each area is likely to be large. Though further trials are needed, much planning is necessary before trials are established if maximum information is to be obtained from existing resources.

Sectional measurements are also severely lacking in these three areas. Abundant sectional measurement data are necessary before volume estimates may be considered reliable for any of these areas. Harakeke is in a slightly better position than the other areas having sectional measurements on both younger and older trees. However, sectional measurements need to be taken on all future trials established.

By identifying the places that data are lacking, it is not intended that the data for this study be seen as grossly incomplete. On the contrary, more data were available in this study to examinethe effects of fertilizer in the Nelson region than in most other published studies of forest fertilization. As a result, reliable methodology that will quantify the effect of fertilization on growth and yield in Nelson has been produced. However, it is important to recognize that the methodology resulting from this study is not meant to be confined to this study only, but should also be considered applicable to similar studies elsewhere. While the methodology presented in this thesis is not likely to be the final methodology adopted in all similar studies, it should be recognized as a significant first step in solving the problem of quantifying the effects of forest fertilization.

It must be remembered, however, that the mere quantification of fertilizer effects was not the ultimate objective of this study, nor should it be the main aim of subsequent studies. Rather, as stated in Chapter 1, this study was undertaken to provide the land manager with a tool to enable more efficient management of the forest resource. By quantifying the effects of fertilization and incorporating them into an already existing management tool (a computer growth model for Golden Downs), such a tool has been produced. It is hoped that this tool will be extensively used in order to maximize the productivity of the forest resource in the Nelson region.

CHAPTER 11

CONCLUSIONS

(1) The findings of other researchers that, for pole crop radiata pine in Golden Downs State Forest,

(a) net stand basal area growth can be increased by fertilizing with nitrogen alone or nitrogen and phosphorous combined,

(b) no significant height response is evident,

and (c) no significant response in either height or basal area can be demonstrated through application of boron alone or boron and phosphorous combined,

are confirmed.

(2) Response in stand basal area to applications of nitrogen or nitrogen and phosphorous can be modelled in terms of a sigmoid curve which levels off four years after fertilization. The magnitude of the response increases at a decreasing rate with increasing rates of fertilizer and, in terms of stand characteristics at time of fertilization, response is (a) lower the older the stand, (b) lower on more fertile sites, and (c) greater the larger the basal area at the time of fertilization.

(3) Stand statistics estimated through using the modelling methodology referred to in (2) were equally good for both fertilized and unfertilized trial plots. However, top height and basal area predictions are more reliable than stocking and mortality predictions for both

fertilized and unfertilized stands.

(4) Validation of the model on operationally fertilized stands showed that forecasts were not significantly biased but the variance of residuals was slightly higher than for predictions in (3).

(5) The stems of fertilized trees have a different shape, and greater taper than unfertilized ones. Traditional diameter-height volume function systems, therefore, are unsuitable for estimating volume response to fertilizer adequately.

(6) A flexible taper-based volume estimation system has been devised to allow estimation of overbark and underbark volume for the whole stem or to any specified diameter or height limit and which is as applicable to fertilized as to unfertilized stands.

(7) Stand volume estimates derived by using this taper-based volume estimation system together with a height-diameter function, a Weibull representation of stand diameter distribution, and the calibrated model referred to in (2) are superior to traditionally obtained estimates using actual (rather than model-estimated) stand parameters.

(8) Because growth and yield in the Nelson region is extremely variable, use of similar functions for other areas in Nelson necessitates adaptations in most cases to the Golden Downs equations for stand basal area and top height growth, for stem volume and taper estimation, for functions of height on diameter, and for functions of stand diameter distribution.

(a) Though top height growth is reasonably similar on all areas, estimates from the model of both top height and basal area need to be adjusted to be applicable to other areas, particularly for basal area. Generally growth may be considered slower in each of the other areas compared to Golden Downs; however, for some areas, fertilizer may increase growth above the growth of fertilized stands in Golden Downs.

(b) The only equations of the Golden Downs volume estimating system that are possibly applicable elsewhere are the taper equations to Motueka, the tree height equation to Rabbit Island, and the diameter distribution equations for Harakeke.

(9) Because data availability varied greatly for each of the Nelson soil types which were studied, alterations to allow the use of growth and yield functions on other areas were suggested. Development of functions for each area is recommended and suggestions for further data collection are also made.

ACKNOWLEDGEMENTS

I would like to acknowledge Dr. A.G.D. Whyte, my supervisor, for his contributions to this work.

Thanks are given to the New Zealand Forest Service, the School of Forestry (for a rather hefty computing bill), and the Bank of New Zealand for funding this work.

Thanks are also given to a number of Forest Service personnel; primarily Russ Fitzgerald, John Handiside, and Pat Beatson. Without their help and cooperation, this thesis would have been impossible.

Special thanks are given to Richard Woollons of New Zealand Forest Products for a number of useful suggestions throughout this study.

I would most like to thank my parents who have given me constant moral, emotional, spiritual, and psychological support, not only during this study, but throughout my life. I dedicate this thesis to them as a small indication of the respect, admiration, and love I have for them.

I would also like to thank the people who worked around me, took the brunt of many of my frustrations, and made me laugh nonetheless. The names John Chmelik, Lance Broad, Dr. John Walker, and Catherine McNamara spring to mind.

I also owe a great deal to a number of sports teams for taking my mind off periodic holocausts that occurred during this study. Primarily, the Psycopaths basketball team, and H.S.O.B. soccer team. Special thanks to team members Garth Ritchie and Steve Clegg for simply being

themselves.

Finally, I would be remiss in not thanking primarily Nestles, but also Bushell's and Gregg's when I was really desperate, for manufacturing caffeine-laden coffee which allowed me to work more late nights than I care to remember.

REFLECTIONS
(Courtesy of Mark Twain)

There is something fascinating about science. One gets such wholesale returns of conjecture from such a trifling investment of fact.

- Life On The Mississippi

... for brightness is nothing; it is in the heart that the values lie. I wish I could make him understand that a loving good heart is riches, and riches enough, and that without it intellect is poverty.

- Eve's Diary

It is best to prove things by actual experiment; then you know; whereas if you depend on guessing and supposing and conjecturing, you will never get educated.

Some things you can't find out; but you will never know you can't by guessing and supposing; no, you have to be patient and go on experimenting until you find out that you can't find out. And it is delightful to have it that way; it makes the world so interesting. If there wasn't anything to find out, it would be dull. Even trying to find out and not finding out is just as interesting as trying to find out and finding out, and I don't know but more so. The secret [of the water] was a treasure until I got it; then the excitement all went away, and I recognized a sense of loss.

- Eve's Diary

When angry, count four; when very angry, swear.

Nothing so needs reforming as other people's habits.

If you pick up a starving dog and make him prosperous, he will not bite you. This is the principal difference between a dog and a man.

He is useless on top of the ground; he ought to be under it, inspiring the cabbages.

- Sayings from Pudd'nhead Wilson's Calendar

LITERATURE CITED

Ballard,R. and Will,G.M.,1971. Distribution of aerially applied fertilizer in New Zealand forests. N.Z. J. of For. Sci. 1(1):50-59.

Beekhuis,J.,1966. Prediction of yield and increment in pinus radiata stands in New Zealand. N.Z. For. Ser. For. Res. Inst. Technical Paper 49, 41 pp.

Brand,G.J. and Holdaway,M.R.,1983. Users need performance information to evaluate models. J. of For. April:235-7.

Bruce,D.,1981. Consistent height-growth and growth-rate estimates for remeasured plots. For. Sci. 27(4):711-725.

Buchman,R.G. and Shifley,S.R.,1983. Guide to evaluating forest growth projection systems. J. of For. April:232-4.

Burkhart,H.E.,1977. Stand modelling for radiata pine in New Zealand. N.Z. J. of For. 22(2):297-307.

Cameron,D.M., Rance,S.J., and Williams,E.R.,1982. Effects of Fertilizer on Growth, Form, and Concentration of Nutrient in the Needles of Pinus caribea var. hondurensis in the Northern Territory. Austral. For. Res. 12(2):105-19.

Cellier,K.M. and Stephens,C.G.,1980. Effect of Fertilizer and Weed Control on the Early Growth of Pinus radiata D. Don. in Southern Australia. Austral. For Res. 10: 141-53.

Chittenden,E.T., Hodgson,L., and Dodson,K.J.,1966. Soils and agriculture of Waimea County New ZealannFor Res. 10: nd Sci. and Indus. Res., Soil Bureua Bulletin 30, 66 pp.

Daniels,R.F. and Burkhart,H.E.,1975. Simulation of individual tree growth and stand development in managed loblolly pine plantations. Divn. of For. and Wildl. Res., V.P.I. & S.U. Blacksburg, Virginia. Rep. FWS-5-75, 69 pp.

Demaerschalk,J.P.,1973. Derivation and analysis of compatible tree taper and volume estimating systems. PhD. Thesis. Univ. of Brit. Colum. 127 pp.

Ek,A.R.,1974. Nonlinear models for stand table projection in northern hardwood stands. Can. J. For. Res. 4(1):23-7.

_______, Issos,T.N., and Bailey,R.L.,1975. Solving for Weibull diameter distribution parameters to obtain specified mean diameters. For. Sci. 21(3):290-2.

_______ and Monserud,R.A.,1974. FOREST: A computer model for simulating the growth and reproduction of mixed species forest stands. Res. Rep. R2635, Sch. of Nat. Res., Univ. of Wisc., 72 pp.

Ferell,R.S. and Lundgren,A.L.,1976. Mathematical functions for predicting growth and yield of black walnut plantations in the Central States. U.S.D.A. For. Ser. Gen. Tech. Rep. NC-24, North Cent. For. Expt. Sta., 5 pp.

Ferguson,I.S. and Leech,J.W.,1978. Generalized lest squares estimation of yield functions. For. Sci. 24(1):27-42.

Freese,F.,1960. Testing Accuracy. For. Sci. 6(2):139-145.

Garcia,O.,1979. Modelling stand development with stochastic differential equations. N.Z. For. Res. Inst. Symp. No. 20. Mensuration for management planning of exotic forest plantations. Ref. 19:315-333.

_________,1981a. IFS, An interactive forest simulator for long range planning. N.Z. J. of For. Sci. 11(1):8-22.

_____________b. Simplified method-of-moments estimation for the Weibull distribution. N.Z. J. of For. Sci. 11(3): 304-6.

Glover,G.R. and Hool,J.N.,1979. A basal area ratio predictor of loblolly pine plantation mortality. For. Sci. 25(2): 275-282.

Goulding,C.J.,1979. Validation of growth models used in forest management. N.Z. J. of For. 24:108-124.

_____________ and Murray,J.C.,1975. Polynomial taper equations that are compatible with tree volume equations. N.Z. J. of For. Sci. 5(3):313-322.

_____________ and Shirley,J.W.,1978. A method to predict the yield of log assortments for long term planning. N.Z. For. Res. Inst. Symp. No. 20. Mensuration for management planning of exotic forest plantations. Ref. 18:301-314.

Hegyi,F.,1974. A simulation model for managing jack pine stands. In Growth Models for Tree and Stand Simulation. (Ed. Fries,J.) Royal College of Forestry,Stockholm. Res. Notes 30:74-87.

Jacks,H., Fitzgerald,R.E., Keizer,R., and Phibbs,S.B.,1972. Results of soils and nutrition experiments in Nelson for 1972. N.Z. For. Res. Inst. Soils and Site Productivity Rep. No. 41, 141 pp.

Kendall,M.G.,Buckland,W.R.,1957. Dictionary of Statistical Terms. Oliver and Boyd Ltd., Edinburgh.

Kilpatrick,D.J.,1978. Growth models for unthinned stands of Sitka spruce in Northern Ireland. Forestry 51(1):47-56.

Lewis,E.R.,1954. Yield of unthinned pinus radiata in New Zealand. N.Z. For. Ser. For. Res. Inst. For. Res. Notes 1(10).

McEwen,A.D.,1978. Yield research plots of the Forest Research Institute. N.Z. For. Res. Inst. Symp. No. 20. Mensuration For Management Planning of Exotic Forest Plantations. Ref. 17, 253-301.

Max,T.A. and Burkhart,H.E.,1976. Segmented polynomial regression applied to taper equations. For. Sci. 22(3): 283-9.

Mead,D.J.,1974. Fertilizer response in a mature stand of radiata pine at Braeburn, Nelson. N.Z. For. Ser. For. Res. Inst. Soils and Site Productivity Rep. No. 55. 37 pp.

Meng,C.H., 1981. Detection of stem form change after stand treatment. Can. J. of For. Res. 11:105-111.

Miller,H.G. and Cooper,J.M.,1973. Changes in amount and distribution of stem growth in pole-stage Corsican pine following application of nitrogen fertilizer. Forestry 46(2):157-190.

Mitchell,K.J. and Kellogg,R.M.,1972. Distribution of area increment over the bole of fertilized Douglas-fir. Can. J. of For. Res. 2:95-7.

Munro,D.D.,1974. Forest growth models -- a prognosis. In Growth Models for Tree and Stand Simulation. (Ed. J.Fries) Royal College of Forestry, Stockholm, Sweden.

Ormerod,D.W.,1973. A simple bole model. For. Chron. 49(3): 136-8.

New Zealand For. Ser. For. Res. Inst.,1977. Symp. No. 19. 7-10 March.Use of Fertilizers in New Zealand Forestry. (Comp. by Ballard,R.).

Pegg,R.E.,1966. Stem form of fertilized loblolly pine. J. of For. 65:19-20.

Pienaar,L.V. and Turnbull,K.J.,1973. The Chapman-Richards generalization of von Bertalanffy's growth model for basal area growth and yield in even-aged stands. For. Sci. 19(1):2-22.

Reynolds,M.R., Burkhart,H.E., and Daniels,R.F.,1981. Procedures for statistical validation of stochastic simulation models. For. Sci. 27:349-364.

Rosvall,O.,1979. Predictive equations for the estimation of fertilizer responses in Sweden. Institutet for skogsforbattring. Information 1. 43 pp. (Article in Swedish, summary in English).

Shepard,R.K.,1981. Two year results from fertilized white pine(Pinus strobus,L.) stands in western Maine. Univ. of Maine Misc. Rep. 259, Cooperative For. Res. Unit Prog. Rep. 18, Dec., 9pp.

Snowdon,P.,1981. Estimation of Height from Diameter Measurements in Fertilizer Trials. Austral. For. Res. 11:223-230.

Snowdon,P.,Waring,H.D.,Woollons,R.C.,1981. Effect of fertilizer and weed control on stem form and average taper in plantation-grown pines. Australian For. Res. 11: 209-221.

Sullivan,A.D. and Clutter,J.L.,1972. A simultaneous growth and yield model for loblolly pine. For. Sci. 18(1): 76-86.

_________________ Reynolds,M.R.,1976. Regression problems from repeated measurements. For. Sci. 22(4):382-5.

Tennent,R.B.,1982a. Individual tree growth model for pinus radiata. N.Z. J. of For. Sci. 12(1)::62-70.

_________________b. The status of growth modelling of radiata pine in New Zealand. N.Z. J. of For. 27(2):254-8.

Turner,B.J., Bednarz,R.W., and Dargavel,J.B.,1979. A model to generate stand strategies for intensively-managed radiata pine plantations. N.Z. For. Ser. For. Res. Inst. Symp. No.20. Mensuration for Management Planning of Exotic Forest Plantations. Ref. 20, 334-346.

Turner,J.,1982. Long-term Superphosphate Trial in Regeneration of Pinus radiata at Belanglo State Forest, N.S.W. Austral. For. Res. 12:1-9.

Waring,H.D.,1980. Fertilizer Experiments in Established Stands of Pinus radiata using Fractionally Replicated Designs 1. Plantation, 6 years of age, Mt. Stromlo Forest, A.C.T. Austral.For. Res. 10(3):259-77.

West,P.W.,1981. Simulation of diameter growth and mortality in regrowth eucalypt forest of southern Tasmania. For. Sci. 27(3):603-616.

Whyte,A.G.D.,1971. Sectional measurement of trees: a rationalised method. N.Z. J. of For. Sci. 1(1):74-9.

___________ and Mead,D.J.,1976. Quantifying responses to fertilizer in the growth of radiata pine. N.Z. J. of For.Sci. 6(3):431-442.

Woollons,R.C. and Will,G.M.,1975. Increasing growth in high production radiata pine stands by nitrogen fertilizers. N.Z. J. of Forestry 20:243-255.

Appendix 1. Summary of procedures used when recording sectional measurements. (From Whyte (1971) with his permission.)

1. Measure overbark diameter at the nearest mid-internode to 0.75 m and four bark thicknesses at that height on the north, south, east, and west aspects of the tree.
2. Measure breast-height diameter and bark thicknesses as in in (1).
3. Using breast height as a reference point, measure diameter overbark and four bark thicknesses at mid-inter- in taper steps of approximately 25 mm diameter overbark if the large-end diameter is 250 mm or less, of 50 mm if the large-end diameter is between 250 and 500 mm, of 75 mm if the large-end diameter is between 500 and 750 mm, and so on to about 50 mm top diameter overbark.
4. Record diameters, bark thicknesses, and heights of measurements above ground sequentially from butt to tip.
5. Measure all heights to the nearest 0.05 m, all diameters and bark thicknesses to the nearest 1.0 mm.
6. Head each tree with plot and tree reference numbers, the number of diameter measuring points, tree height, and the date measured.

Appendix 2. Coefficient values of the Golden Downs model.

$$\underline{c} = \begin{matrix} c_{11} & c_{12} & c_{13} \\ 0 & c_{22} & 0 \\ 0 & 0 & c_{33} \end{matrix} = \begin{matrix} 0.48283 & -0.15956 & 0.23154 \\ 0 & -0.52458 & 0 \\ 0 & 0 & 0.41272 \end{matrix}$$

$$\text{Inverse: } \underline{c} = \underline{d} = \begin{matrix} d_{11} & d_{12} & d_{13} \\ 0 & d_{22} & 0 \\ 0 & 0 & d_{33} \end{matrix} = \begin{matrix} 2.07112 & -0.62997 & -1.16192 \\ 0 & -1.90629 & 0 \\ 0 & 0 & 2.42295 \end{matrix}$$

$$\underline{p} = \begin{matrix} p_{11} & p_{12} & p_{13} \\ p_{21} & p_{22} & p_{23} \\ 0 & 0 & 1 \end{matrix} = \begin{matrix} 1 & 1.85401 & 1 \\ 0.00186 & 1 & -0.00091 \\ 0 & 0 & 1 \end{matrix}$$

$$\text{Inverse: } \underline{p} = \underline{q} = \begin{matrix} q_{11} & q_{12} & q_{13} \\ q_{21} & q_{22} & q_{23} \\ 0 & 0 & 1 \end{matrix} = \begin{matrix} 1.00345 & -1.86041 & 0.89134 \\ -0.00186 & 1.00345 & -0.00075 \\ 0 & 0 & 1 \end{matrix}$$

$$\underline{a} = \begin{matrix} 0 \\ a_2 \\ a_3 \end{matrix} = \begin{matrix} 0 \\ 5.63633 \\ 5.09773 \end{matrix} \qquad \underline{L} = \begin{matrix} L_{11} & 0 & 0 \\ 0 & L_{22} & 0 \\ 0 & 0 & -1 \end{matrix} = \begin{matrix} -0.451290 & 0 & 0 \\ 0 & -0.00155 & 0 \\ 0 & 0 & -1 \end{matrix}$$

$t0 = -2.5793$

Appendix 3. Integration for sectional volume of the taper equation employed.

$$V = D^2\left(b_1\left(\frac{l_1^2-l_2^2}{2h}\right) + b_2\left(\frac{l_1^3-l_2^3}{3h^2}\right) + b_3\left(\frac{l_1^4-l_2^4}{4h^3}\right) + b_4\left(\frac{l_1^5-l_2^5}{5h^4}\right) + b_5\left(\frac{l_1^6-l_2^6}{6h^5}\right)\right)\left(\frac{3.1416}{40000}\right)$$

where: l_1 and l_2 are respectively upper and lower height of section (h and 0) for stem volume)

This equation may be used to solve for diameter at a given point, but to obtain height to a given diameter, an iterative procedure on a computer is most effective.

Appendix 4. Stand growth data used to derive the unadjusted model.

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Rf
N790	400	2610	840	63.9	24.3	32.0	630	72.4	32.8	39.2	27.16	0.0	0	0	0
N790	400	2610	259	41.5	32.8	39.3	229	47.6	40.2	40.9	25.26	0.0	0	0	0
N790	500	2230	247	36.8	29.3	33.2	241	43.6	32.9	35.7	23.42	0.0	0	0	0
N790	600	2600	735	61.2	24.1	31.3	704	70.4	27.9	34.2	26.43	0.0	0	0	0
N790	600	2600	704	70.4	27.9	34.2	618	74.7	32.0	38.0	26.11	0.0	0	0	0
N790	800	2690	988	77.1	25.0	33.1	982	82.2	27.0	34.8	27.58	0.0	0	0	0
N790	800	2690	982	82.2	27.0	34.8	926	85.9	29.9	37.0	27.22	0.0	0	0	0
N790	800	2690	926	85.9	29.9	37.0	667	83.5	33.9	39.6	26.75	0.0	0	0	0
N790	800	2690	667	83.5	33.9	39.6	642	92.9	39.1	44.3	27.58	0.0	0	0	0
N791	700	2300	760	51.2	22.3	26.3	723	63.2	26.9	31.2	23.99	0.0	0	0	0
N791	700	2300	723	63.2	26.9	31.2	636	68.7	31.1	33.5	23.21	0.0	0	0	0
N791	800	2470	1025	71.2	22.3	26.6	920	81.5	26.9	32.4	24.72	0.0	0	0	0
N791	800	2470	920	81.5	26.9	32.4	809	86.8	31.1	37.3	25.70	0.0	0	0	0
N791	800	2470	809	86.8	31.1	37.3	729	90.7	34.8	39.8	26.15	0.0	0	0	0
N792	400	2480	760	61.9	21.2	26.8	624	80.1	29.9	34.8	25.27	0.0	0	0	0
N792	400	2480	624	80.1	29.9	34.8	593	83.7	34.0	37.8	24.59	0.0	0	0	0
N793	300	2540	920	62.4	21.3	27.1	846	74.6	25.9	32.3	25.99	0.0	0	0	0
N793	300	2540	846	74.6	25.9	32.3	784	82.0	30.1	35.7	25.74	0.0	0	0	0
N793	400	2380	537	11.9	13.0	14.4	513	25.4	17.9	20.5	23.95	0.0	0	0	0
N793	400	2380	513	25.4	17.9	20.5	482	38.4	24.0	29.0	24.21	0.0	0	0	0
N793	400	2380	482	38.4	24.0	29.0	457	52.7	33.3	37.2	24.56	0.0	0	0	0
N793	700	2630	661	25.3	15.0	19.9	451	38.2	23.1	29.6	26.85	0.0	0	0	0
N793	800	2480	791	20.4	13.0	15.4	741	41.2	17.9	22.8	25.80	0.0	0	0	0
N793	800	2480	741	41.2	17.9	22.8	630	56.0	23.8	28.3	25.18	0.0	0	0	0
N793	800	2480	630	56.0	23.8	28.3	624	64.9	27.1	32.7	24.76	0.0	0	0	0
N793	900	2440	803	20.6	15.0	17.6	760	38.1	19.9	24.1	24.74	0.0	0	0	0
N793	900	2440	760	38.1	19.9	24.1	661	54.0	27.0	32.8	25.07	0.0	0	0	0
N794	000	2910	1285	43.9	15.0	21.2	1130	57.7	19.9	28.7	29.06	0.0	0	0	0
N794	000	2910	1130	57.7	19.9	28.7	1056	60.2	21.8	32.2	29.89	0.0	0	0	0
N794	000	2910	476	38.3	21.8	32.2	426	47.8	27.1	37.7	30.43	0.0	0	0	0
N794	100	2450	457	21.3	17.0	21.2	457	36.3	21.9	26.5	25.17	0.0	0	0	0
N794	100	2450	457	36.3	21.9	26.5	432	43.8	25.1	30.7	24.97	0.0	0	0	0
N794	100	2450	432	43.8	25.1	30.7	432	52.3	29.0	34.0	25.00	0.0	0	0	0
N794	100	2450	432	52.3	29.0	34.0	426	60.8	33.2	37.0	24.48	0.0	0	0	0
N794	200	2550	630	44.5	19.9	25.4	587	51.9	23.1	28.6	25.69	0.0	0	0	0
N794	300	2570	476	25.3	18.0	22.8	476	34.6	21.9	28.2	26.13	0.0	0	0	0
N795	000	2710	2594	10.6	5.8	5.5	2563	39.3	10.0	13.6	27.54	0.0	0	0	0
N795	000	2710	2563	39.3	10.0	13.6	1235	46.0	15.8	21.4	28.53	0.0	0	0	0
N795	000	2710	1235	46.0	15.8	21.4	1180	54.2	18.8	26.3	28.05	0.0	0	0	0
N795	000	2710	1180	54.2	18.8	26.3	976	61.9	25.0	31.2	27.12	0.0	0	0	0
N795	200	2390	1421	1.1	4.8	3.2	1371	42.4	14.8	16.1	22.38	0.0	0	0	0
N795	200	2390	933	37.2	14.8	16.1	933	49.0	18.2	21.6	23.85	0.0	0	0	0
N795	200	2390	933	49.0	18.2	21.6	840	61.6	24.0	30.7	25.41	0.0	0	0	0
N795	200	2390	840	61.6	24.0	30.7	766	62.5	25.3	31.6	26.18	0.0	0	0	0
N795	500	3260	1775	44.9	11.2	16.8	1686	59.9	15.0	21.9	30.22	0.0	0	0	0
N030	100	2830	896	22.1	12.2	16.2	896	35.4	14.9	21.3	28.58	0.0	0	0	0
N030	100	2830	432	19.8	14.9	21.4	420	29.4	18.0	25.2	28.79	0.0	0	0	0
N030	100	2830	420	29.4	18.0	25.2	414	35.8	20.2	29.2	28.91	0.0	0	0	0
N030	100	2830	272	26.2	20.2	29.2	272	31.2	21.9	29.9	28.73	0.0	0	0	0
N030	100	2830	272	31.2	21.9	29.9	272	36.9	24.2	33.0	28.26	0.0	0	0	0
N030	100	2830	272	36.9	24.2	33.0	272	42.1	25.9	36.0	29.14	0.0	0	0	0
N030	100	2830	179	30.8	25.9	36.0	173	34.2	27.8	37.8	29.81	0.0	0	0	0
N030	100	2830	173	34.2	27.8	37.8	173	37.8	30.0	39.5	29.76	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Ff	Bf
N030	100	2830	173	37.8	30.0	39.5	173	39.5	31.0	39.9	29.48	0.0	0	0	0
N030	200	2810	1655	19.9	9.2	11.9	1618	34.0	12.2	16.3	28.48	0.0	0	0	0
N030	200	2810	1130	26.5	12.2	16.4	1118	38.9	14.9	21.4	28.75	0.0	0	0	0
N030	200	2810	599	22.5	14.9	21.5	599	32.9	18.0	25.3	28.89	0.0	0	0	0
N030	200	2810	599	32.9	18.0	25.3	562	37.9	20.2	28.4	28.56	0.0	0	0	0
N030	200	2810	420	30.7	20.2	28.4	420	35.7	21.9	29.8	28.28	0.0	0	0	0
N030	200	2810	420	35.7	21.9	29.8	414	41.3	24.2	32.2	27.81	0.0	0	0	0
N030	200	2810	414	41.3	24.2	32.2	414	46.6	25.9	35.3	28.37	0.0	0	0	0
N030	200	2810	303	37.3	25.9	35.3	272	40.6	30.0	39.0	29.09	0.0	0	0	0
N030	200	2810	272	40.6	30.0	39.0	272	42.3	31.0	40.1	29.31	0.0	0	0	0
N030	300	2880	2831	31.7	9.2	12.0	2707	47.1	12.2	16.8	28.87	0.0	0	0	0
N030	300	2880	2707	47.1	12.2	16.8	2608	58.1	14.9	22.0	29.33	0.0	0	0	0
N030	300	2880	2608	58.1	14.9	22.0	2089	61.9	18.0	26.6	29.82	0.0	0	0	0
N030	300	2880	2089	61.9	18.0	26.6	1595	56.2	20.2	29.1	29.57	0.0	0	0	0
N030	300	2880	1595	56.2	20.2	29.1	1434	57.7	21.9	30.6	29.03	0.0	0	0	0
N030	300	2880	1434	57.7	21.9	30.6	1360	60.3	24.2	33.2	28.71	0.0	0	0	0
N030	300	2880	1360	60.3	24.2	33.2	1298	64.3	25.9	35.3	28.88	0.0	0	0	0
N030	300	2880	1298	64.3	25.9	35.3	1100	68.6	30.0	40.0	29.66	0.0	0	0	0
N030	300	2880	1100	68.6	30.0	40.0	1014	68.5	31.0	41.0	30.43	0.0	0	0	0
N100	200	2570	450	53.4	25.0	32.2	445	55.9	26.2	34.3	27.28	0.0	0	0	0
N180	000	2670	247	32.2	24.3	32.6	210	52.3	36.0	43.4	28.81	0.0	0	0	0
N190	000	2840	395	26.5	19.3	27.4	290	44.0	31.0	38.3	28.13	0.0	0	0	0
N620	100	2630	1087	54.9	21.0	27.7	1047	57.0	22.1	28.5	26.67	0.0	0	0	0
N620	400	2720	998	58.7	21.0	28.6	998	61.2	22.1	30.3	28.01	0.0	0	0	0
N780	100	2590	272	11.5	14.0	16.9	272	15.9	16.1	20.1	25.72	0.0	0	0	0
N780	100	2590	272	15.9	16.1	20.1	272	18.5	17.0	21.7	26.02	0.0	0	0	0
N780	100	2590	272	18.5	17.0	21.7	272	21.1	17.9	23.2	26.34	0.0	0	0	0
N780	100	2590	272	21.1	17.9	23.2	272	23.8	19.0	25.0	26.64	0.0	0	0	0
N780	100	2590	272	23.8	19.0	25.0	272	26.1	19.9	26.1	26.76	0.0	0	0	0
N780	100	2590	272	26.1	19.9	26.1	272	28.7	20.9	27.8	26.94	0.0	0	0	0
N780	200	2830	272	13.8	14.0	19.9	272	18.2	16.1	22.1	28.54	0.0	0	0	0
N780	200	2830	272	18.2	16.1	22.1	272	20.9	17.0	23.9	28.25	0.0	0	0	0
N780	200	2830	272	20.9	17.0	23.9	272	23.4	17.9	25.7	28.77	0.0	0	0	0
N780	200	2830	272	23.4	17.9	25.7	272	25.8	19.0	27.4	29.13	0.0	0	0	0
N780	200	2830	272	25.8	19.0	27.4	272	27.9	19.9	28.3	29.07	0.0	0	0	0
N780	200	2830	272	27.9	19.9	28.3	272	30.9	20.9	29.6	28.94	0.0	0	0	0
N780	300	2770	272	11.2	14.0	18.5	272	15.2	16.1	21.7	27.53	0.0	0	0	0
N780	300	2770	272	15.2	16.1	21.7	272	17.5	17.0	23.3	27.73	0.0	0	0	0
N780	300	2770	272	17.5	17.0	23.3	272	19.9	17.9	25.3	28.26	0.0	0	0	0
N780	300	2770	272	19.9	17.9	25.3	272	22.2	19.0	26.3	28.37	0.0	0	0	0
N780	300	2770	272	22.2	19.0	26.3	272	24.1	19.9	28.1	28.42	0.0	0	0	0
N780	300	2770	272	24.1	19.9	28.1	272	26.3	20.9	30.1	29.09	0.0	0	0	0
N780	400	2760	272	13.9	14.0	18.8	272	18.6	16.1	21.7	27.70	0.0	0	0	0
N780	400	2760	272	18.6	16.1	21.7	272	21.2	17.0	23.1	27.62	0.0	0	0	0
N780	400	2760	272	21.2	17.0	23.1	272	23.4	17.9	24.9	27.95	0.0	0	0	0
N780	400	2760	272	23.4	17.9	24.9	272	25.9	19.0	26.4	28.22	0.0	0	0	0
N780	400	2760	272	25.9	19.0	26.4	272	28.0	19.9	27.8	28.32	0.0	0	0	0
N780	400	2760	272	28.0	19.9	27.8	272	30.3	20.9	29.2	28.49	0.0	0	0	0
N780	500	2890	420	16.6	14.0	19.3	395	23.4	17.0	25.0	29.02	0.0	0	0	0
N780	500	2890	395	23.4	17.0	25.0	395	26.5	17.9	26.6	29.80	0.0	0	0	0
N780	500	2890	395	26.5	17.9	26.6	395	28.9	19.0	27.7	29.74	0.0	0	0	0
N780	500	2890	395	28.9	19.0	27.7	395	31.5	19.9	29.0	29.57	0.0	0	0	0
N780	500	2890	395	31.5	19.9	29.0	395	34.2	20.9	30.5	29.74	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	AF	NF	PF	BF
N780	600	2950	420	21.9	14.0	20.9	420	27.8	16.1	23.7	29.94	0.0	0	0	0
N780	600	2950	420	27.8	16.1	23.7	420	31.2	17.0	25.5	29.92	0.0	0	0	0
N780	600	2950	420	31.2	17.0	25.5	420	34.5	17.9	26.5	30.00	0.0	0	0	0
N780	600	2950	420	34.5	17.9	26.5	420	37.2	19.0	28.3	29.99	0.0	0	0	0
N780	600	2950	420	37.2	19.0	28.3	420	40.1	19.9	29.0	29.88	0.0	0	0	0
N780	600	2950	420	40.1	19.9	29.0	420	42.9	20.9	30.7	29.84	0.0	0	0	0
N780	700	2770	420	19.7	14.0	18.8	420	25.4	16.1	22.1	27.91	0.0	0	0	0
N780	700	2770	420	25.4	16.1	22.1	420	28.8	17.0	24.0	28.30	0.0	0	0	0
N780	700	2770	420	28.8	17.0	24.0	420	32.5	17.9	24.9	28.42	0.0	0	0	0
N780	700	2770	420	32.5	17.9	24.9	420	35.5	19.0	26.2	28.12	0.0	0	0	0
N780	700	2770	420	35.5	19.0	26.2	420	38.9	19.9	28.0	28.32	0.0	0	0	0
N780	700	2770	420	38.9	19.9	28.0	420	41.4	20.9	29.1	28.54	0.0	0	0	0
N780	800	2760	420	18.4	14.0	17.9	420	24.0	16.1	22.0	27.34	0.0	0	0	0
N780	800	2760	420	24.0	16.1	22.0	420	27.4	17.0	24.0	28.25	0.0	0	0	0
N780	800	2760	420	27.4	17.0	24.0	420	30.7	17.9	25.1	28.52	0.0	0	0	0
N780	800	2760	420	30.7	17.9	25.1	420	33.3	19.0	26.4	28.32	0.0	0	0	0
N780	800	2760	420	33.3	19.0	26.4	420	36.0	19.9	27.7	28.27	0.0	0	0	0
N780	800	2760	420	36.0	19.9	27.7	420	38.5	20.9	29.2	28.44	0.0	0	0	0
N780	900	2720	198	10.5	14.0	17.8	198	14.8	16.1	21.8	27.17	0.0	0	0	0
N780	900	2720	198	14.8	16.1	21.8	198	16.9	17.0	23.7	27.99	0.0	0	0	0
N780	900	2720	198	16.9	17.0	23.7	198	19.0	17.9	24.3	27.95	0.0	0	0	0
N780	900	2720	198	19.0	17.9	24.3	198	20.7	19.0	25.9	27.66	0.0	0	0	0
N780	900	2720	198	20.7	19.0	25.9	198	22.6	19.9	27.4	27.87	0.0	0	0	0
N780	900	2720	198	22.6	19.9	27.4	198	24.4	20.9	28.9	28.14	0.0	0	0	0
N781	000	2760	198	10.2	14.0	18.2	198	14.2	16.1	21.7	27.35	0.0	0	0	0
N781	000	2760	198	14.2	16.1	21.7	198	16.5	17.0	23.9	28.04	0.0	0	0	0
N781	000	2760	198	16.5	17.0	23.9	198	18.6	17.9	24.7	28.26	0.0	0	0	0
N781	000	2760	198	18.6	17.9	24.7	198	20.6	19.0	26.4	28.12	0.0	0	0	0
N781	000	2760	198	20.6	19.0	26.4	198	22.5	19.9	28.0	28.42	0.0	0	0	0
N781	000	2760	198	22.5	19.9	28.0	198	24.6	20.9	29.1	28.54	0.0	0	0	0
N781	100	2700	124	6.5	14.0	18.5	124	9.4	16.1	21.4	27.37	0.0	0	0	0
N781	100	2700	124	9.4	16.1	21.4	124	11.2	17.0	22.8	27.30	0.0	0	0	0
N781	100	2700	124	11.2	17.0	22.8	124	12.7	17.9	24.3	27.48	0.0	0	0	0
N781	100	2700	124	12.7	17.9	24.3	124	14.3	19.0	25.1	27.25	0.0	0	0	0
N781	100	2700	124	14.3	19.0	25.1	124	15.8	19.9	27.4	27.46	0.0	0	0	0
N781	100	2700	124	15.8	19.9	27.4	124	17.5	20.9	28.6	27.99	0.0	0	0	0
N781	200	2560	111	5.5	14.0	17.0	111	8.2	16.1	19.7	25.56	0.0	0	0	0
N781	200	2560	111	8.2	16.1	19.7	111	9.8	17.0	21.5	25.69	0.0	0	0	0
N781	200	2560	111	9.8	17.0	21.5	111	11.3	17.9	23.2	26.23	0.0	0	0	0
N781	200	2560	111	11.3	17.9	23.2	111	12.9	19.0	24.2	26.23	0.0	0	0	0
N781	200	2560	111	12.9	19.0	24.2	111	14.5	19.9	25.8	26.21	0.0	0	0	0
N781	200	2560	111	14.5	19.9	25.8	111	16.1	20.9	27.3	26.54	0.0	0	0	0
N781	300	2710	1556	46.4	14.0	19.5	1457	50.7	16.1	21.9	28.21	0.0	0	0	0
N781	300	2710	1457	50.7	16.1	21.9	1407	53.4	17.0	22.7	27.52	0.0	0	0	0
N781	300	2710	1407	53.4	17.0	22.7	1407	56.6	17.9	24.4	27.48	0.0	0	0	0
N781	300	2710	1407	56.6	17.9	24.4	1407	60.1	19.0	25.3	27.41	0.0	0	0	0
N781	300	2710	1407	60.1	19.0	25.3	1407	63.1	19.9	26.7	27.21	0.0	0	0	0
N781	300	2710	1407	63.1	19.9	26.7	1407	65.9	20.9	27.7	27.19	0.0	0	0	0
N781	400	2590	1481	42.6	14.0	17.9	1457	48.6	16.1	20.5	26.53	0.0	0	0	0
N781	400	2590	1457	48.6	16.1	20.5	1457	51.7	17.0	22.5	26.66	0.0	0	0	0
N781	400	2590	1457	51.7	17.0	22.5	1432	55.5	17.9	22.8	26.55	0.0	0	0	0
N781	400	2590	1432	55.5	17.9	22.8	1432	58.3	19.0	24.2	26.02	0.0	0	0	0
N781	400	2590	1432	58.3	19.0	24.2	1432	61.0	19.9	25.1	25.86	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N781	400	2590	1432	61.0	19.9	25.1	1383	62.7	20.9	27.2	26.14	0.0	0	0	0
N000	100	3080	227	5.2	7.3	10.6	227	10.0	9.2	13.9	31.76	0.0	0	0	0
N000	100	3080	227	10.0	9.2	13.9	227	13.0	10.0	15.3	31.67	0.0	0	0	0
N000	100	3080	227	13.0	10.0	15.3	227	19.7	12.0	18.3	31.34	0.0	0	0	0
N000	100	3080	227	19.7	12.0	18.3	227	25.1	13.9	21.4	30.97	0.0	0	0	0
N000	200	3180	435	9.7	7.3	11.3	435	16.1	9.2	14.7	32.88	0.0	0	0	0
N000	200	3180	435	16.1	9.2	14.7	435	20.0	10.0	16.0	32.66	0.0	0	0	0
N000	200	3180	435	20.0	10.0	16.0	425	28.6	12.0	19.2	32.31	0.0	0	0	0
N000	200	3180	425	28.6	12.0	19.2	425	35.7	13.9	22.5	32.08	0.0	0	0	0
N000	300	3230	1423	24.3	7.0	10.8	1423	35.9	9.2	15.3	33.31	0.0	0	0	0
N000	300	3230	494	14.5	9.3	15.3	494	17.8	10.0	16.6	33.31	0.0	0	0	0
N000	300	3230	494	17.8	10.0	16.6	455	30.7	13.9	22.3	32.59	0.0	0	0	0
N000	400	3090	217	4.9	7.3	10.7	217	9.3	9.2	14.0	31.91	0.0	0	0	0
N000	400	3090	217	9.3	9.2	14.0	217	12.3	10.0	15.0	31.54	0.0	0	0	0
N000	400	3090	217	12.3	10.0	15.0	217	18.5	12.0	18.4	31.20	0.0	0	0	0
N000	400	3090	217	18.5	12.0	18.4	217	23.8	13.9	21.4	31.03	0.0	0	0	0
N000	500	3080	1729	23.9	7.0	10.2	1729	35.8	9.2	14.0	31.94	0.0	0	0	0
N000	500	3080	494	12.0	9.3	14.0	494	15.2	10.0	14.8	31.29	0.0	0	0	0
N000	500	3080	494	15.2	10.0	14.8	494	23.8	12.0	18.2	30.95	0.0	0	0	0
N000	500	3080	494	23.8	12.0	18.2	494	30.7	13.9	21.7	31.07	0.0	0	0	0
N000	600	3210	464	10.0	7.3	11.8	464	16.0	9.2	14.9	33.40	0.0	0	0	0
N000	600	3210	464	16.0	9.2	14.9	464	19.7	10.0	16.3	32.98	0.0	0	0	0
N000	600	3210	464	19.7	10.0	16.3	464	28.0	12.0	20.1	33.00	0.0	0	0	0
N000	600	3210	464	28.0	12.0	20.1	464	34.4	13.9	22.6	32.64	0.0	0	0	0
N000	700	3150	1275	16.7	7.0	9.8	1275	27.1	9.2	13.6	31.31	0.0	0	0	0
N000	700	3150	484	12.6	9.3	13.7	484	15.9	10.0	15.3	31.41	0.0	0	0	0
N000	700	3150	484	15.9	10.0	15.3	455	23.0	12.0	19.2	31.86	0.0	0	0	0
N000	700	3150	455	23.0	12.0	19.2	455	27.8	13.9	23.9	32.81	0.0	0	0	0
N000	800	3200	198	4.7	7.3	10.5	178	7.7	9.2	14.6	32.15	0.0	0	0	0
N000	800	3200	178	7.7	9.2	14.6	178	10.1	10.0	16.3	32.78	0.0	0	0	0
N000	800	3200	178	10.1	10.0	16.3	178	15.5	12.0	19.7	32.78	0.0	0	0	0
N000	800	3200	178	15.5	12.0	19.7	178	19.6	13.9	22.8	32.52	0.0	0	0	0
N000	900	3150	514	9.9	7.3	10.2	514	16.1	9.2	14.1	31.56	0.0	0	0	0
N000	900	3150	514	16.1	9.2	14.1	504	19.7	10.0	15.5	31.94	0.0	0	0	0
N000	900	3150	504	19.7	10.0	15.5	504	28.4	12.0	20.3	32.60	0.0	0	0	0
N000	900	3150	504	28.4	12.0	20.3	504	35.7	13.9	22.3	32.59	0.0	0	0	0
N100	100	3280	490	9.1	7.0	11.0	490	11.8	7.9	12.9	33.54	0.0	0	0	0
N100	100	3280	490	11.8	7.9	12.9	490	14.7	9.0	14.6	33.42	0.0	0	0	0
N100	100	3280	490	14.7	9.0	14.6	490	20.8	11.0	18.2	33.06	0.0	0	0	0
N100	200	3200	480	7.4	7.0	10.6	480	9.6	7.9	12.1	32.62	0.0	0	0	0
N100	200	3160	250	5.2	8.0	12.3	250	6.5	9.0	13.8	32.29	0.0	0	0	0
N100	200	3160	250	6.5	9.0	13.8	250	10.3	11.0	16.9	31.74	0.0	0	0	0
N100	300	3230	490	7.5	7.0	10.5	490	10.1	7.9	13.5	33.55	0.0	0	0	0
N100	300	3230	250	5.6	8.0	12.7	250	7.4	9.0	14.2	32.86	0.0	0	0	0
N100	300	3230	250	7.4	9.0	14.2	250	11.6	11.0	17.6	32.44	0.0	0	0	0
N100	400	3140	490	7.5	7.0	10.3	490	10.2	7.9	12.0	32.28	0.0	0	0	0
N100	400	3140	490	10.2	7.9	12.0	490	13.1	9.0	13.7	32.13	0.0	0	0	0
N100	400	3140	490	13.1	9.0	13.7	490	19.2	11.0	16.8	31.61	0.0	0	0	0
N100	500	3180	250	8.0	9.0	13.5	250	12.1	11.0	18.1	32.25	0.0	0	0	0
N100	600	3450	490	8.8	7.0	12.4	490	11.9	7.9	13.7	35.17	0.0	0	0	0
N100	600	3450	490	11.9	7.9	13.7	490	15.1	9.0	15.7	34.69	0.0	0	0	0
N100	600	3450	490	15.1	9.0	15.7	490	21.7	11.0	19.9	34.73	0.0	0	0	0
N100	700	3150	490	7.7	7.0	10.3	490	10.7	7.9	11.6	31.97	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N100	700	3150	250	5.7	8.0	11.8	250	8.1	9.0	14.2	32.18	0.0	0	0	0
N100	700	3150	250	8.1	9.0	14.2	250	12.2	11.0	17.1	32.14	0.0	0	0	0
N100	800	3100	490	7.8	7.0	10.2	490	10.2	7.9	11.4	31.73	0.0	0	0	0
N100	800	3100	230	5.3	8.0	11.5	220	6.3	9.0	13.4	31.39	0.0	0	0	0
N100	800	3100	220	6.3	9.0	13.4	220	9.1	11.0	16.2	31.03	0.0	0	0	0
N100	900	3110	460	6.4	7.0	10.5	460	8.9	7.9	11.6	32.14	0.0	0	0	0
N100	900	3110	460	8.9	7.9	11.6	460	11.6	9.0	13.3	31.54	0.0	0	0	0
N100	900	3110	460	11.6	9.0	13.3	460	17.4	11.0	16.4	31.08	0.0	0	0	0
N101	000	3100	490	7.2	7.0	10.4	490	9.6	7.9	11.1	31.66	0.0	0	0	0
N101	000	3100	250	5.1	8.0	11.2	240	10.4	11.0	16.7	31.00	0.0	0	0	0
N101	100	3030	250	5.0	8.0	11.0	250	6.6	9.0	12.4	30.26	0.0	0	0	0
N101	100	3030	250	6.6	9.0	12.4	250	10.0	11.0	17.1	30.85	0.0	0	0	0
N101	200	3030	490	6.6	7.0	9.3	490	8.9	7.9	11.3	30.84	0.0	0	0	0
N101	200	3030	490	8.9	7.9	11.3	490	12.1	9.0	13.1	31.16	0.0	0	0	0
N101	200	3030	490	12.1	9.0	13.1	490	17.7	11.0	16.2	30.81	0.0	0	0	0
N101	300	3070	490	7.9	7.0	9.9	490	10.6	7.9	10.8	30.98	0.0	0	0	0
N101	300	3070	490	10.6	7.9	10.8	490	13.6	9.0	13.2	30.82	0.0	0	0	0
N101	300	3070	490	13.6	9.0	13.2	490	19.4	11.0	17.0	31.38	0.0	0	0	0
N101	400	3030	490	6.7	7.0	9.5	490	8.7	7.9	11.2	30.94	0.0	0	0	0
N101	400	3030	250	5.1	8.0	11.5	250	6.0	9.0	13.1	31.18	0.0	0	0	0
N101	400	3030	250	6.0	9.0	13.1	250	8.6	11.0	15.8	30.56	0.0	0	0	0
N101	500	2930	490	6.6	7.0	10.0	480	8.8	8.0	10.9	31.01	0.0	0	0	0
N101	500	2930	250	4.9	8.0	10.6	250	6.7	9.0	11.7	29.39	0.0	0	0	0
N101	500	2930	250	6.7	9.0	11.7	250	10.6	11.0	14.6	28.71	0.0	0	0	0
N710	100	2240	247	2.2	6.0	8.5	247	3.4	6.9	9.5	31.62	0.0	0	0	0
N710	100	2240	247	3.4	6.9	9.5	247	5.7	8.2	11.4	30.85	0.0	0	0	0
N710	100	2240	247	5.7	8.2	11.4	247	7.2	9.2	13.0	30.50	0.0	0	0	0
N710	100	2240	247	7.2	9.2	13.0	247	8.9	9.9	14.6	30.69	0.0	0	0	0
N710	100	2240	247	8.9	9.9	14.6	247	11.1	11.0	16.4	30.88	0.0	0	0	0
N710	200	2180	208	1.9	6.0	8.3	208	2.7	6.9	9.1	31.04	0.0	0	0	0
N710	200	2180	208	2.7	6.9	9.1	208	4.3	8.2	11.4	30.47	0.0	0	0	0
N710	200	2180	208	4.3	8.2	11.4	208	5.7	9.2	12.7	30.28	0.0	0	0	0
N710	200	2180	208	5.7	9.2	12.7	208	7.1	9.9	14.0	30.06	0.0	0	0	0
N710	200	2180	208	7.1	9.9	14.0	208	8.8	11.0	15.8	30.09	0.0	0	0	0
N710	300	2230	287	2.4	6.0	7.8	287	3.5	6.9	9.6	30.98	0.0	0	0	0
N710	300	2230	287	3.5	6.9	9.6	287	5.5	8.2	11.5	31.02	0.0	0	0	0
N710	300	2230	287	5.5	8.2	11.5	287	7.1	9.2	12.8	30.43	0.0	0	0	0
N710	300	2230	287	7.1	9.2	12.8	287	8.6	9.9	14.4	30.40	0.0	0	0	0
N710	300	2230	287	8.6	9.9	14.4	287	10.9	11.0	16.5	30.81	0.0	0	0	0
N710	400	2090	326	2.4	6.0	7.4	326	3.4	6.9	8.9	29.89	0.0	0	0	0
N710	400	2090	326	3.4	6.9	8.9	326	6.2	8.2	11.1	30.04	0.0	0	0	0
N710	400	2090	326	6.2	8.2	11.1	326	8.3	9.2	12.4	29.81	0.0	0	0	0
N710	400	2090	326	8.3	9.2	12.4	326	10.3	10.0	13.5	29.36	0.0	0	0	0
N710	400	2090	326	10.3	10.0	13.5	316	12.6	11.0	15.3	29.30	0.0	0	0	0
N710	500	2190	306	2.5	6.0	7.1	306	3.4	6.9	9.5	30.11	0.0	0	0	0
N710	500	2190	306	3.4	6.9	9.5	306	5.6	8.2	11.6	31.00	0.0	0	0	0
N710	500	2190	306	5.6	8.2	11.6	306	7.1	9.2	12.8	30.51	0.0	0	0	0
N710	500	2190	306	7.1	9.2	12.8	306	8.6	10.0	14.3	30.22	0.0	0	0	0
N710	500	2190	306	8.6	10.0	14.3	306	10.7	11.0	16.3	30.50	0.0	0	0	0
N710	600	2130	455	3.1	6.0	6.9	455	4.9	6.9	9.2	29.60	0.0	0	0	0
N710	600	2130	455	4.9	6.9	9.2	455	7.7	8.2	11.3	30.49	0.0	0	0	0
N710	600	2130	455	7.7	8.2	11.3	445	9.6	9.2	12.5	30.05	0.0	0	0	0
N710	600	2130	277	6.4	9.2	12.6	277	7.8	9.9	13.9	29.91	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N710	600	2130	277	7.8	9.9	13.9	277	9.6	11.0	15.7	29.96	0.0	0	0	0
N710	700	2200	524	4.5	6.0	7.6	524	6.7	6.9	9.2	30.40	0.0	0	0	0
N710	700	2200	524	6.7	6.9	9.2	524	10.3	8.2	11.4	30.57	0.0	0	0	0
N710	700	2200	524	10.3	8.2	11.4	524	13.0	9.2	13.0	30.50	0.0	0	0	0
N710	700	2200	267	6.9	9.2	13.1	267	8.4	9.9	14.2	30.49	0.0	0	0	0
N710	700	2200	267	8.4	9.9	14.2	267	10.5	11.0	16.3	30.55	0.0	0	0	0
N710	800	2140	366	3.1	6.0	7.2	366	4.6	6.9	9.1	29.85	0.0	0	0	0
N710	800	2140	346	4.4	6.9	9.1	346	6.6	8.2	11.3	30.39	0.0	0	0	0
N710	800	2140	346	6.6	8.2	11.3	346	8.2	9.2	12.8	30.27	0.0	0	0	0
N710	800	2140	168	4.2	9.2	13.1	168	5.2	9.9	14.1	30.42	0.0	0	0	0
N710	800	2140	168	5.2	9.9	14.1	168	6.7	11.0	15.5	29.97	0.0	0	0	0
N466	801	2240	519	43.2	21.1	23.9	519	49.5	24.0	26.6	22.77	0.0	0	0	0
N466	801	2240	519	49.5	24.0	26.6	519	50.7	25.1	27.5	22.34	0.0	0	0	0
N466	802	2780	425	19.3	13.8	19.5	415	25.7	16.2	20.9	27.77	0.0	0	0	0
N466	802	2780	415	25.7	16.2	20.9	415	41.1	21.9	30.7	27.69	0.0	0	0	0
N466	803	2430	691	13.5	11.2	12.2	691	21.0	13.0	14.9	24.79	0.0	0	0	0
N466	803	2430	691	21.0	13.0	14.9	691	24.0	13.8	16.5	25.18	0.0	0	0	0
N466	803	2430	326	12.7	13.8	16.0	326	25.8	17.9	21.9	24.99	0.0	0	0	0
N466	803	2430	326	25.8	17.9	21.9	326	35.0	20.9	25.0	24.75	0.0	0	0	0
N466	804	2460	346	11.2	12.8	13.1	346	22.7	16.2	20.0	24.23	0.0	0	0	0
N466	804	2460	306	18.6	16.2	19.7	306	23.6	17.9	22.1	25.29	0.0	0	0	0
N466	805	2720	716	10.7	9.2	11.6	716	15.9	11.1	13.0	27.17	0.0	0	0	0
N466	805	2720	370	8.3	11.1	13.5	370	9.6	11.8	15.1	27.11	0.0	0	0	0
N466	805	2720	346	8.7	11.8	15.0	336	17.9	15.9	22.6	28.09	0.0	0	0	0
N466	805	2720	336	17.9	15.9	22.6	336	25.0	18.9	26.2	28.50	0.0	0	0	0
N466	806	2360	1012	8.4	8.2	8.6	1012	15.9	10.2	10.8	25.16	0.0	0	0	0
N466	807	2990	425	16.2	12.2	17.1	425	30.9	17.9	27.8	30.17	0.0	0	0	0
N466	811	2790	385	58.2	30.3	40.0	385	61.3	32.1	39.2	28.76	0.0	0	0	0
N466	828	2430	642	54.9	28.1	32.7	642	58.8	30.2	34.8	24.38	0.0	0	0	0
N466	828	2430	642	58.8	30.2	34.8	642	62.5	32.2	37.7	25.13	0.0	0	0	0
N466	831	1900	464	88.9	39.3	37.9	464	95.8	41.1	39.8	21.26	0.0	0	0	0
N466	832	1800	227	36.2	39.1	36.7	227	40.2	41.1	37.3	19.49	0.0	0	0	0
N467	501	2640	208	22.4	19.2	25.2	198	25.2	20.9	27.6	26.85	0.0	0	0	0
N467	502	3030	227	25.5	18.2	27.6	227	29.8	19.9	29.9	30.53	0.0	0	0	0
N467	503	2750	366	30.4	18.2	24.8	366	35.6	19.9	27.2	27.76	0.0	0	0	0
N467	504	2800	306	25.6	18.2	25.3	306	30.2	19.9	27.4	28.12	0.0	0	0	0
N467	505	2560	366	20.0	17.2	21.4	366	23.9	18.9	24.5	26.01	0.0	0	0	0
N467	506	2720	306	21.3	17.2	23.0	306	25.3	18.9	25.3	27.26	0.0	0	0	0
N467	507	2810	217	19.5	17.2	23.8	217	22.7	18.9	26.6	28.33	0.0	0	0	0
N467	508	2900	296	22.4	17.3	24.8	296	26.3	18.9	27.1	29.02	0.0	0	0	0
N467	601	2250	270	20.4	16.0	16.8	270	23.4	16.9	18.3	22.49	0.0	0	0	0
N467	602	2420	290	26.3	16.9	19.7	290	30.9	19.2	21.7	23.70	0.0	0	0	0
N467	603	2790	230	15.7	15.0	20.5	230	17.8	16.0	22.8	28.46	0.0	0	0	0
N467	603	2790	230	17.8	16.0	22.8	230	22.5	18.2	25.3	28.55	0.0	0	0	0
N467	604	2820	220	12.2	14.9	20.1	220	16.9	17.2	22.7	27.36	0.0	0	0	0
N467	605	2540	220	14.7	16.0	19.4	220	19.7	18.2	23.2	25.64	0.0	0	0	0
N467	606	2490	240	14.1	15.0	18.0	240	16.4	15.9	19.4	25.29	0.0	0	0	0
N467	606	2490	240	16.4	15.9	19.4	240	22.4	18.2	22.7	25.46	0.0	0	0	0
N467	607	2710	210	10.7	14.0	17.8	210	14.3	14.9	20.4	27.38	0.0	0	0	0
N467	607	2710	210	14.3	14.9	20.4	210	18.9	17.2	23.8	28.10	0.0	0	0	0
N467	608	2520	190	8.6	14.0	16.0	190	9.9	15.0	18.4	25.09	0.0	0	0	0
N467	609	2550	250	15.1	15.0	18.6	250	17.7	16.0	20.4	26.11	0.0	0	0	0
N467	609	2550	250	17.7	16.0	20.4	250	22.6	18.2	23.0	26.08	0.0	0	0	0

Appendix 4. Stand growth data used to derive the unadjusted model. (cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N467	610	2720	350	21.4	16.9	22.5	350	27.6	19.2	25.6	27.17	0.0	0	0	0
N467	611	2680	260	16.1	15.9	20.5	260	20.3	18.2	22.8	26.11	0.0	0	0	0
N467	612	2750	280	11.4	14.0	19.2	280	12.9	15.0	19.7	27.72	0.0	0	0	0
N467	612	2750	280	12.9	15.0	19.7	280	16.9	17.2	24.3	27.89	0.0	0	0	0
N467	613	2820	340	22.3	16.9	23.4	340	28.3	19.2	26.7	28.19	0.0	0	0	0
N467	614	2840	330	21.4	15.9	21.9	310	25.2	18.2	25.4	28.20	0.0	0	0	0
N467	615	2970	410	24.6	14.0	21.0	410	27.4	15.0	22.5	30.25	0.0	0	0	0
N467	615	2970	410	27.4	15.0	22.5	410	33.0	17.2	25.6	30.08	0.0	0	0	0
N467	708	2950	180	9.2	14.0	19.6	180	10.6	14.9	21.1	28.80	0.0	0	0	0
N467	710	3260	330	19.0	14.0	22.4	330	21.4	15.0	24.2	31.90	0.0	0	0	0
N467	711	2940	510	16.1	13.0	17.7	510	18.1	14.0	19.7	28.61	0.0	0	0	0
N466	819	2190	375	57.7	38.2	40.0	375	61.1	40.2	40.7	23.51	0.0	0	0	0
N466	821	2300	543	75.2	39.2	41.6	543	79.1	41.2	44.6	26.32	0.0	0	0	0
N466	824	2390	267	50.6	38.2	41.7	267	55.0	40.2	45.0	27.38	0.0	0	0	0
N466	825	2390	128	26.7	38.3	41.5	128	29.7	40.2	41.2	24.64	0.0	0	0	0
N466	826	2460	435	58.0	32.2	37.3	435	61.7	34.1	38.3	25.13	0.0	0	0	0
N466	826	2460	435	61.7	34.1	38.3	395	62.5	36.2	39.9	25.00	0.0	0	0	0
N466	827	2700	1235	49.7	17.3	22.9	1235	55.1	19.2	25.3	26.93	0.0	0	0	0
N467	806	2860	300	8.4	13.1	17.2	290	9.6	13.9	19.2	28.02	0.0	0	0	0
N467	814	2690	130	5.0	13.1	15.8	120	5.8	13.9	17.2	25.99	0.0	0	0	0
N467	834	3050	300	15.6	13.1	18.8	275	17.3	13.9	20.4	29.64	0.0	0	0	0

Appendix 5. Stand growth data for fertilizer trials in Golden Downs.

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N262	001	1970	1481	12.7	6.0	9.1	1481	18.3	7.0	11.3	32.61	0.0	0	0	0
N262	001	1971	1481	12.7	6.0	9.1	1481	24.0	8.0	13.0	32.61	0.0	0	0	0
N262	001	1972	1481	12.7	6.0	9.1	1481	29.4	9.0	14.7	32.61	0.0	0	0	0
N262	001	1973	1481	12.7	6.0	9.1	1481	33.8	10.0	16.3	32.61	0.0	0	0	0
N262	001	1975	346	11.5	11.1	15.6	346	14.1	12.0	16.9	32.61	0.0	0	0	0
N262	002	1970	1481	8.7	6.0	8.0	1481	15.3	7.0	9.8	30.60	6.0	269	112	9
N262	002	1971	1481	8.7	6.0	8.0	1481	21.9	8.0	10.7	30.60	6.0	269	112	9
N262	002	1972	1481	8.7	6.0	8.0	1481	28.0	9.0	12.7	30.60	6.0	269	112	9
N262	002	1973	1481	8.7	6.0	8.0	1481	31.8	10.0	14.2	30.60	6.0	269	112	9
N262	002	1975	346	11.2	11.1	14.5	346	13.7	12.0	15.6	30.60	6.0	269	112	9
N262	003	1970	1481	7.3	6.0	7.8	1481	11.8	7.0	10.0	30.20	0.0	0	0	0
N262	003	1971	1481	7.3	6.0	7.8	1481	16.3	8.0	11.5	30.20	0.0	0	0	0
N262	003	1972	1481	7.3	6.0	7.8	1481	20.7	9.0	12.8	30.20	0.0	0	0	0
N262	003	1973	1481	7.3	6.0	7.8	1481	23.9	10.0	14.6	30.20	0.0	0	0	0
N262	003	1975	370	10.2	11.1	14.7	370	12.3	12.0	16.3	30.20	0.0	0	0	0
N262	004	1970	1481	6.2	6.0	6.8	1481	12.6	7.0	8.6	27.92	6.0	269	112	9
N262	004	1971	1481	6.2	6.0	6.8	1481	19.7	8.0	10.0	27.92	6.0	269	112	9
N262	004	1972	1481	6.2	6.0	6.8	1481	25.0	9.0	10.9	27.92	6.0	269	112	9
N262	004	1973	1481	6.2	6.0	6.8	1481	29.4	10.0	12.7	27.92	6.0	269	112	9
N262	004	1975	395	12.1	11.1	14.9	395	15.4	12.0	16.2	27.92	6.0	269	112	9
N262	005	1970	1481	8.7	6.0	7.4	1481	13.3	7.0	9.6	29.70	0.0	0	0	0
N262	005	1971	1481	8.7	6.0	7.4	1481	18.4	8.0	11.5	29.70	0.0	0	0	0
N262	005	1972	1481	8.7	6.0	7.4	1481	23.1	9.0	12.7	29.70	0.0	0	0	0
N262	005	1973	1481	8.7	6.0	7.4	1481	26.6	10.0	14.5	29.70	0.0	0	0	0
N262	005	1975	321	10.0	11.1	15.9	321	12.4	12.0	17.3	29.70	0.0	0	0	0
N262	006	1970	1481	10.3	6.0	7.6	1481	17.4	7.0	9.1	29.75	6.0	269	112	9
N262	006	1971	1481	10.3	6.0	7.6	1481	25.2	8.0	11.0	29.75	6.0	269	112	9
N262	006	1972	1481	10.3	6.0	7.6	1481	31.7	9.0	12.5	29.75	6.0	269	112	9
N262	006	1973	1481	10.3	6.0	7.6	1481	36.2	10.0	14.2	29.75	6.0	269	112	9
N262	006	1975	346	12.5	11.1	15.0	346	15.2	12.0	16.3	29.75	6.0	269	112	9
N261	001	1971	408	63.4	44.0	38.7	408	67.2	45.0	41.1	26.24	44.0	269	112	9
N261	001	1972	408	63.4	44.0	38.7	408	68.1	47.0	41.4	26.24	44.0	269	112	9
N261	001	1973	408	63.4	44.0	38.7	396	68.9	48.0	41.6	26.24	44.0	269	112	9
N261	003	1970	346	58.7	44.0	37.2	346	60.4	45.0	37.3	26.24	0.0	0	0	0
N261	003	1971	346	58.7	44.0	37.2	346	61.6	46.0	40.1	26.24	0.0	0	0	0
N261	003	1972	346	58.7	44.0	37.2	346	62.7	47.0	40.0	26.24	0.0	0	0	0
N261	003	1973	346	58.7	44.0	37.2	346	63.7	48.0	40.4	26.24	0.0	0	0	0
N261	004	1971	383	71.1	44.0	37.8	371	70.8	46.0	38.9	26.24	44.0	269	112	9
N261	004	1972	383	71.1	44.0	37.8	371	72.1	47.0	39.4	26.24	44.0	269	112	9
N261	004	1973	383	71.1	44.0	37.8	371	73.4	48.0	42.8	26.24	44.0	269	112	9
N261	005	1970	371	66.0	44.0	40.2	371	67.4	45.0	40.1	26.24	0.0	0	0	0
N261	005	1971	371	66.0	44.0	40.2	371	69.3	46.0	41.7	26.24	0.0	0	0	0
N261	005	1972	371	66.0	44.0	40.2	371	69.9	47.0	42.0	26.24	0.0	0	0	0
N261	005	1973	371	66.0	44.0	40.2	371	70.7	48.0	42.2	26.24	0.0	0	0	0
N261	002	1971	309	56.7	44.0	39.7	309	60.3	46.0	41.3	26.24	44.0	269	112	9
N261	002	1972	309	56.7	44.0	39.7	309	60.9	47.0	41.7	26.24	44.0	269	112	9
N261	002	1973	309	56.7	44.0	39.7	309	62.3	48.0	46.3	26.24	44.0	269	112	9
N261	006	1970	396	68.4	44.0	38.3	396	70.6	45.0	38.3	26.24	0.0	0	0	0
N261	006	1971	396	68.4	44.0	38.3	396	72.4	46.0	43.9	26.24	0.0	0	0	0
N261	006	1972	396	68.4	44.0	38.3	396	73.1	47.0	45.0	26.24	0.0	0	0	0
N261	006	1973	396	68.4	44.0	38.3	383	75.2	48.0	45.8	26.24	0.0	0	0	0
N378	001	1975	333	5.7	7.0	10.1	333	9.6	8.1	11.6	31.38	7.0	300		0 0
N378	001	1976	333	5.7	7.0	10.1	333	13.0	9.2	12.9	31.38	7.0	300		0 0

Appendix 5. Stand growth data for fertilizer trials in Golden Downs.
(cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N378	001	1977	333	5.7	7.0	10.1	333	15.3	10.1	15.2	31.38	7.0	300	0	0
N378	001	1978	333	5.7	7.0	10.1	333	17.5	11.0	16.5	31.38	7.0	300	0	0
N378	001	1979	256	13.1	11.0	16.4	256	16.3	12.0	18.3	31.38	11.2	300	0	0
N378	001	1980	256	13.1	11.0	16.4	256	20.2	13.0	20.7	31.38	11.2	300	0	0
N378	001	1981	256	13.1	11.0	16.4	256	23.5	14.1	22.0	31.38	11.2	300	0	0
N378	001	1982	256	13.1	11.0	16.4	256	26.4	15.0	23.6	31.38	11.2	300	0	0
N378	002	1975	333	5.1	7.0	10.5	333	8.7	8.1	12.6	32.07	7.0	200	0	0
N378	002	1976	333	5.1	7.0	10.5	333	12.1	9.2	14.3	32.07	7.0	200	0	0
N378	002	1977	333	5.1	7.0	10.5	333	14.6	10.1	15.4	32.07	7.0	200	0	0
N378	002	1978	333	5.1	7.0	10.5	333	16.7	11.0	17.7	32.07	7.0	200	0	0
N378	002	1979	256	12.6	11.0	17.6	256	15.3	12.0	19.3	32.07	11.2	200	0	0
N378	002	1980	256	12.6	11.0	17.6	256	18.8	13.0	20.9	32.07	11.2	200	0	0
N378	002	1981	256	12.6	11.0	17.6	256	21.4	14.1	22.5	32.07	11.2	200	0	0
N378	002	1982	256	12.6	11.0	17.6	256	23.5	15.0	23.7	32.07	11.2	200	0	0
N378	003	1975	367	5.2	7.0	10.8	367	8.5	8.1	13.1	32.14	0.0	0	0	0
N378	003	1976	367	5.2	7.0	10.8	367	11.7	9.2	14.5	32.14	0.0	0	0	0
N378	003	1977	367	5.2	7.0	10.8	367	14.1	10.1	15.9	32.14	0.0	0	0	0
N378	003	1978	367	5.2	7.0	10.8	367	16.5	11.0	17.9	32.14	0.0	0	0	0
N378	003	1979	267	12.4	11.0	17.9	267	15.3	12.0	19.7	32.14	0.0	0	0	0
N378	003	1980	267	12.4	11.0	17.9	267	18.5	13.0	21.3	32.14	0.0	0	0	0
N378	003	1981	267	12.4	11.0	17.9	267	21.1	14.1	23.8	32.14	0.0	0	0	0
N378	003	1982	267	12.4	11.0	17.9	267	23.6	15,0	26.3	32.14	0.0	0	0	0
N378	004	1975	367	4.8	7.0	10.0	367	8.6	8.1	12.0	31.20	7.0	100	0	0
N378	004	1976	367	4.8	7.0	10.0	367	12.2	9.2	13.4	31.20	7.0	100	0	0
N378	004	1977	367	4.8	7.0	10.0	367	14.8	10.1	15.0	31.20	7.0	100	0	0
N378	004	1978	367	4.8	7.0	10.0	367	17.4	11.0	16.9	31.20	7.0	100	0	0
N378	004	1979	267	13.0	11.0	16.9	267	15.8	12.0	18.7	31.20	11.2	100	0	0
N378	004	1980	267	13.0	11.0	16.9	267	19.5	13.0	20.3	31.20	11.2	100	0	0
N378	004	1981	267	13.0	11.0	16.9	267	22.3	14.1	22.1	31.20	11.2	100	0	0
N378	004	1982	267	13.0	11.0	16.9	267	24.8	15.0	22.8	31.20	11.2	100	0	0
N378	005	1975	467	6.0	7.0	9.3	467	9.1	8.1	10.9	30.52	0.0	0	0	0
N378	005	1976	467	6.0	7.0	9.3	467	12.4	9.2	13.7	30.52	0.0	0	0	0
N378	005	1979	267	11.8	11.0	17.3	267	14.3	12.0	18.6	30.52	0.0	0	0	0
N378	005	1980	267	11.8	11.0	17.3	267	17.0	13.0	20.5	30.52	0.0	0	0	0
N378	005	1981	267	11.8	11.0	17.3	267	19.2	14.1	22.1	30.52	0.0	0	0	0
N378	005	1982	267	11.8	11.0	17.3	267	21.2	15.0	23.7	30.52	0.0	0	0	0
N378	006	1975	422	5.4	7.0	9.9	400	9.8	8.1	11.6	31.03	7.0	200	0	0
N378	006	1976	422	5.4	7.0	9.9	400	14.8	9.2	12.7	31.03	7.0	200	0	0
N378	006	1979	267	14.9	11.0	17.2	267	18.0	12.0	19.2	31.03	11.2	200	0	0
N378	006	1980	267	14.9	11.0	17.2	267	21.8	13.0	21.3	31.03	11.2	200	0	0
N378	006	1981	267	14.9	11.0	17.2	267	24.5	14.1	22.9	31.03	11.2	200	0	0
N378	006	1982	267	14.9	11.0	17.2	267	26.9	15.0	24.9	31.03	11.2	200	0	0
N378	007	1975	478	6.1	7.0	9.9	478	10.3	8.1	11.7	31.03	7.0	100	0	0
N378	007	1976	478	6.1	7.0	9.9	467	14.7	9.2	13.5	31.03	7.0	100	0	0
N378	007	1979	267	13.7	11.0	17.4	267	16.6	12.0	19.3	31.03	11.2	100	0	0
N378	007	1980	267	13.7	11.0	17.4	267	19.9	13.0	21.2	31.03	11.2	100	0	0
N378	007	1981	267	13.7	11.0	17.4	267	22.5	14.1	22.7	31.03	11.2	100	0	0
N378	007	1982	267	13.7	11.0	17.4	267	24.6	15.0	24.4	31.03	11.2	100	0	0
N378	008	1975	456	6.0	7.0	10.5	456	10.4	8.1	12.8	32.07	7.0	300	0	0
N378	008	1976	456	6.0	7.0	10.5	456	15.2	9.2	14.5	32.07	7.0	300	0	0
N378	008	1979	267	14.6	11.0	18.0	267	17.5	12.0	19.6	32.07	11.2	300	0	0
N378	008	1980	267	14.6	11.0	18.0	267	21.1	13.0	21.2	32.07	11.2	300	0	0
N378	008	1981	267	14.6	11.0	18.0	267	24.3	14.1	22.4	32.07	11.2	300	0	0

Appendix 5. Stand growth data for fertilizer trials in Golden Downs.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N378	008	1982	267	14.6	11.0	18.0	267	26.9	15.0	24.3	32.07	11.2	300	0	0
N378	009	1975	511	4.5	7.0	7.6	511	7.1	8.1	9.3	26.73	7.0	200	0	0
N378	009	1976	511	4.5	7.0	7.6	511	10.2	9.2	10.9	26.73	7.0	200	0	0
N378	009	1977	511	4.5	7.0	7.6	511	12.8	10.1	12.1	26.73	7.0	200	0	0
N378	009	1978	511	4.5	7.0	7.6	511	15.4	11.0	13.9	26.73	7.0	200	0	0
N378	009	1979	267	9.1	11.0	13.9	267	11.5	12.0	15.7	26.73	11.2	200	0	0
N378	009	1980	267	9.1	11.0	13.9	267	14.8	13.0	16.9	26.73	11.2	200	0	0
N378	009	1981	267	9.1	11.0	13.9	267	17.7	14.1	18.7	26.73	11.2	200	0	0
N378	009	1982	267	9.1	11.0	13.9	267	19.9	15.0	20.1	26.73	11.2	200	0	0
N378	010	1975	456	4.5	7.0	8.7	456	8.0	8.1	10.6	28.79	7.0	300	0	0
N378	010	1976	456	4.5	7.0	8.7	456	12.1	9.2	12.2	28.79	7.0	300	0	0
N378	010	1977	456	4.5	7.0	8.7	456	15.1	10.1	13.5	28.79	7.0	300	0	0
N378	010	1978	456	4.5	7.0	8.7	456	17.8	11.0	15.0	28.79	7.0	300	0	0
N378	010	1979	267	10.7	11.0	14.7	267	13.0	12.0	16.3	28.79	11.2	300	0	0
N378	010	1980	267	10.7	11.0	14.7	267	16.5	13.0	17.7	28.79	11.2	300	0	0
N378	010	1981	267	10.7	11.0	14.7	267	19.5	14.1	18.9	28.79	11.2	300	0	0
N378	010	1982	267	10.7	11.0	14.7	267	22.1	15.0	21.0	28.79	11.2	300	0	0
N378	011	1975	489	5.0	7.0	8.3	489	7.5	8.1	9.4	28.19	7.0	100	0	0
N378	011	1976	489	5.0	7.0	8.3	489	10.3	9.2	11.7	28.19	7.0	100	0	0
N378	011	1977	489	5.0	7.0	8.3	489	12.8	10.1	12.9	28.19	7.0	100	0	0
N378	011	1978	489	5.0	7.0	8.3	489	15.2	11.0	14.4	28.19	7.0	100	0	0
N378	011	1979	267	9.1	11.0	14.7	267	11.2	12.0	16.0	28.19	11.2	100	0	0
N378	011	1980	267	9.1	11.0	14.7	267	13.8	13.0	17.3	28.19	11.2	100	0	0
N378	011	1981	267	9.1	11.0	14.7	267	16.2	14.1	18.5	28.19	11.2	100	0	0
N378	011	1982	267	9.1	11.0	14.7	267	18.4	15.0	20.0	28.19	11.2	100	0	0
N378	012	1975	511	4.6	7.0	8.7	511	6.9	8.1	10.1	28.58	0.0	0	0	0
N378	012	1976	511	4.6	7.0	8.7	511	9.4	9.2	12.6	28.58	0.0	0	0	0
N378	012	1977	511	4.6	7.0	8.7	511	11.8	10.1	14.0	28.58	0.0	0	0	0
N378	012	1978	511	4.6	7.0	8.7	511	14.1	11.0	14.9	28.58	0.0	0	0	0
N378	012	1979	267	8.4	11.0	14.9	267	10.2	12.0	16.5	28.58	0.0	0	0	0
N378	012	1980	267	8.4	11.0	14.9	267	12.4	13.0	18.3	28.58	0.0	0	0	0
N378	012	1981	267	8.4	11.0	14.9	267	14.7	14.1	20.1	28.58	0.0	0	0	0
N378	012	1982	267	8.4	11.0	14.9	267	16.8	15.0	21.6	28.58	0.0	0	0	0
N386	001	1977	378	3.9	8.2	7.8	378	5.5	9.1	8.3	23.56	8.2	0	50	8
N386	001	1978	378	3.9	8.2	7.8	378	7.3	10.0	9.5	23.56	8.2	0	50	8
N386	001	1979	378	3.9	8.2	7.8	378	9.7	11.0	11.1	23.56	8.2	0	50	8
N386	001	1980	378	3.9	8.2	7.8	378	12.5	12.0	12.4	23.56	8.2	0	50	8
N386	002	1977	411	3.9	8.2	7.7	411	6.1	9.1	8.6	23.36	8.2	200	50	8
N386	002	1978	411	3.9	8.2	7.7	411	8.7	10.0	9.4	23.36	8.2	200	50	8
N386	002	1979	411	3.9	8.2	7.7	411	11.6	11.0	10.7	23.36	8.2	200	50	8
N386	002	1980	411	3.9	8.2	7.7	411	14.6	12.0	12.6	23.36	8.2	200	50	8
N386	003	1977	422	3.9	8.2	7.8	422	6.2	9.1	9.2	23.56	8.2	100	50	8
N386	003	1978	422	3.9	8.2	7.8	422	8.7	10.0	10.5	23.56	8.2	100	50	8
N386	003	1979	422	3.9	8.2	7.8	422	11.3	11.0	12.1	23.56	8.2	100	50	8
N386	003	1980	422	3.9	8.2	7.8	422	14.4	12.0	13.8	23.56	8.2	100	50	8
N386	004	1977	422	3.7	8.2	7.4	422	6.2	9.1	8.8	22.73	8.2	300	50	8
N386	004	1978	422	3.7	8.2	7.4	422	8.9	10.0	9.7	22.73	8.2	300	50	8
N386	004	1979	422	3.7	8.2	7.4	411	12.2	11.0	10.7	22.73	8.2	300	50	8
N386	004	1980	422	3.7	8.2	7.4	411	15.6	12.0	12.4	22.73	8.2	300	50	8
N386	005	1977	367	3.3	8.2	7.4	367	5.5	9.1	7.9	22.73	8.2	200	50	8
N386	005	1978	367	3.3	8.2	7.4	367	7.9	10.0	8.7	22.73	8.2	200	50	8
N386	005	1979	367	3.3	8.2	7.4	367	10.8	11.0	10.3	22.73	8.2	200	50	8
N386	005	1980	367	3.3	8.2	7.4	367	13.7	12.0	11.4	22.73	8.2	200	50	8

Appendix 5. Stand growth data for fertilizer trials in Golden Downs. (cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N386	006	1977	400	3.3	8.2	7.7	400	5.4	9.1	8.8	23.36	8.2	100	50	8
N386	006	1978	400	3.3	8.2	7.7	400	7.6	10.0	9.9	23.36	8.2	100	50	8
N386	006	1979	400	3.3	8.2	7.7	400	10.1	11.0	11.3	23.36	8.2	100	50	8
N386	006	1980	400	3.3	8.2	7.7	400	13.0	12.0	13.0	23.36	8.2	100	50	8
N386	007	1977	356	3.4	8.2	7.2	356	4.8	9.1	8.0	22.31	8.2	0	50	8
N386	007	1978	356	3.4	8.2	7.2	356	6.3	10.0	9.2	22.31	8.2	0	50	8
N386	007	1979	356	3.4	8.2	7.2	356	8.4	11.0	11.3	22.31	8.2	0	50	8
N386	007	1980	356	3.4	8.2	7.2	356	11.1	12.0	13.3	22.31	8.2	0	50	8
N386	008	1977	356	3.2	8.2	6.9	356	5.1	9.1	7.7	21.65	8.2	300	50	8
N386	008	1978	356	3.2	8.2	6.9	356	7.3	10.0	8.7	21.65	8.2	300	50	8
N386	008	1979	356	3.2	8.2	6.9	344	10.2	11.0	9.9	21.65	8.2	300	50	8
N386	008	1980	356	3.2	8.2	6.9	344	13.0	12.0	11.5	21.65	8.2	300	50	8
N386	009	1977	333	2.5	8.2	7.7	333	4.1	9.1	8.4	23.36	8.2	200	50	8
N386	009	1978	333	2.5	8.2	7.7	333	5.9	10.0	10.7	23.36	8.2	200	50	8
N386	009	1979	333	2.5	8.2	7.7	333	8.1	11.0	12.2	23.36	8.2	200	50	8
N386	009	1980	333	2.5	8.2	7.7	333	10.4	12.0	13.6	23.36	8.2	200	50	8
N386	010	1977	344	2.4	8.2	6.6	344	3.6	9.1	7.7	20.99	8.2	100	50	8
N386	010	1978	344	2.4	8.2	6.6	344	5.1	10.0	9.0	20.99	8.2	100	50	8
N386	010	1979	344	2.4	8.2	6.6	344	7.0	11.0	11.1	20.99	8.2	100	50	8
N386	010	1980	344	2.4	8.2	6.6	344	9.2	12.0	12.8	20.99	8.2	100	50	8
N386	011	1977	311	2.5	8.2	8.0	311	3.8	9.1	9.3	23.97	8.2	300	50	8
N386	011	1978	311	2.5	8.2	8.0	311	5.4	10.0	10.5	23.97	8.2	300	50	8
N386	011	1979	311	2.5	8.2	8.0	311	7.5	11.0	12.4	23.97	8.2	300	50	8
N386	011	1980	311	2.5	8.2	8.0	311	9.7	12.0	14.4	23.97	8.2	300	50	8
N386	012	1977	344	2.5	8.2	6.8	344	3.5	9.1	8.0	21.43	8.2	0	50	8
N386	012	1978	344	2.5	8.2	6.8	344	4.8	10.0	9.1	21.43	8.2	0	50	8
N386	012	1979	344	2.5	8.2	6.8	344	6.7	11.0	10.8	21.43	8.2	0	50	8
N386	012	1980	344	2.5	8.2	6.8	344	8.7	12.0	12.4	21.43	8.2	0	50	8
N379	001	1975	320	19.3	15.6	21.3	320	21.1	16.0	22.4	27.43	15.6	216	240	9
N379	001	1976	320	19.3	15.6	21.3	320	24.6	17.0	23.6	27.43	15.6	216	240	9
N379	001	1977	320	19.3	15.6	21.3	310	27.1	18.2	25.4	27.43	15.6	216	240	9
N379	001	1978	320	19.3	15.6	21.3	310	29.0	19.0	26.1	27.43	15.6	216	240	9
N379	001	1979	320	19.3	15.6	21.3	310	31.3	20.0	27.7	27.43	15.6	216	240	9
N379	002	1975	280	18.1	15.6	22.4	280	19.2	16.0	23.1	28.49	15.6	0	0	9
N379	002	1976	280	18.1	15.6	22.4	280	21.8	17.0	24.0	28.49	15.6	0	0	9
N379	002	1977	280	18.1	15.6	22.4	280	24.1	18.2	25.9	28.49	15.6	0	0	9
N379	002	1978	280	18.1	15.6	22.4	280	25.9	19.0	27.2	28.49	15.6	0	0	9
N379	002	1979	280	18.1	15.6	22.4	280	27.7	20.0	28.7	28.49	15.6	0	0	9
N379	003	1975	290	19.5	15.6	22.2	290	21.2	16.0	22.8	28.40	15.6	216	240	9
N379	003	1976	290	19.5	15.6	22.2	290	24.2	17.0	24.5	28.40	15.6	216	240	9
N379	003	1977	290	19.5	15.6	22.2	290	26.7	18.2	25.9	28.40	15.6	216	240	9
N379	003	1978	290	19.5	15.6	22.2	270	26.6	19.0	28.3	28.40	15.6	216	240	9
N379	003	1979	290	19.5	15.6	22.2	270	28.3	20.0	29.5	28.40	15.6	216	240	9
N379	004	1975	360	23.4	15.6	22.1	360	25.0	16.0	23.6	28.29	15.6	45	50	9
N379	004	1976	360	23.4	15.6	22.1	360	28.5	17.0	25.4	28.29	15.6	45	50	9
N379	004	1977	360	23.4	15.6	22.1	360	32.0	18.2	27.5	28.29	15.6	45	50	9
N379	004	1978	360	23.4	15.6	22.1	350	33.5	19.0	28.6	28.29	15.6	45	50	9
N379	004	1979	360	23.4	15.6	22.1	350	36.4	20.0	29.7	28.29	15.6	45	50	9
N379	005	1975	330	21.5	15.6	24.1	330	23.0	16.0	24.5	28.95	15.6	0	0	9
N379	005	1976	330	21.5	15.6	24.1	330	26.1	17.0	25.4	28.95	15.6	0	0	9
N379	005	1977	330	21.5	15.6	24.1	330	29.0	18.2	25.6	28.95	15.6	0	0	9
N379	005	1978	330	21.5	15.6	24.1	310	29.0	19.0	27.0	28.95	15.6	0	0	9
N379	005	1979	330	21.5	15.6	24.1	310	31.6	20.0	28.3	28.95	15.6	0	0	9

Appendix 5. Stand growth data for fertilizer trials in Golden Downs.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N379	006	1975	330	21.5	15.6	23.3	330	22.9	16.0	24.0	29.57	15.6	108	120	9
N379	006	1976	330	21.5	15.6	23.3	330	26.5	17.0	25.2	29.57	15.6	108	120	9
N379	006	1977	330	21.5	15.6	23.3	330	29.4	18.2	26.8	29.57	15.6	108	120	9
N379	006	1978	330	21.5	15.6	23.3	330	31.4	19.0	27.4	29.57	15.6	108	120	9
N379	006	1979	330	21.5	15.6	23.3	330	33.9	20.0	30.9	29.57	15.6	108	120	9
N379	008	1975	260	17.0	15.6	22.2	260	18.3	16.0	22.9	28.40	15.6	216	240	9
N379	008	1976	260	17.0	15.6	22.2	260	21.6	17.0	24.4	28.40	15.6	216	240	9
N379	008	1977	260	17.0	15.6	22.2	260	24.5	18.2	26.0	28.40	15.6	216	240	9
N379	008	1978	260	17.0	15.6	22.2	260	26.4	19.0	27.6	28.40	15.6	216	240	9
N379	008	1979	260	17.0	15.6	22.2	260	28.6	20.0	28.4	28.40	15.6	216	240	9
N379	009	1975	350	21.6	15.6	23.7	350	23.4	16.0	24.2	29.98	15.6	108	120	9
N379	009	1976	350	21.6	15.6	23.7	350	27.0	17.0	25.3	29.98	15.6	108	120	9
N379	009	1977	350	21.6	15.6	23.7	350	30.2	18.2	27.1	29.98	15.6	108	120	9
N379	009	1978	350	21.6	15.6	23.7	350	32.5	19.0	28.2	29.98	15.6	108	120	9
N379	009	1979	350	21.6	15.6	23.7	350	35.7	20.0	29.8	29.98	15.6	108	120	9
N379	010	1975	310	18.0	15.6	23.2	310	19.5	16.0	23.4	29.46	15.6	45	50	9
N379	010	1976	310	18.0	15.6	23.2	310	22.8	17.0	24.0	29.46	15.6	45	50	9
N379	010	1977	310	18.0	15.6	23.2	310	25.4	18.2	26.6	29.46	15.6	45	50	9
N379	010	1978	310	18.0	15.6	23.2	310	27.5	19.0	27.1	29.46	15.6	45	50	9
N379	010	1979	310	18.0	15.6	23.2	310	30.5	20.0	28.7	29.46	15.6	45	50	9
N379	007	1975	320	20.4	15.6	23.2	320	21.8	16.0	24.1	29.46	15.6	108	120	9
N379	007	1976	320	20.4	15.6	23.2	320	25.3	17.0	25.1	29.46	15.6	108	120	9
N379	007	1977	320	20.4	15.6	23.2	320	28.3	18.2	27.1	29.46	15.6	108	120	9
N379	007	1978	320	20.4	15.6	23.2	320	30.5	19.0	28.1	29.46	15.6	108	120	9
N379	007	1979	320	20.4	15.6	23.2	320	33.1	20.0	29.6	29.46	15.6	108	120	9
N379	011	1975	190	14.3	15.6	22.5	190	15.5	16.0	23.5	28.72	15.6	45	50	9
N379	011	1976	190	14.3	15.6	22.5	190	18.0	17.0	24.2	28.72	15.6	45	50	9
N379	011	1977	190	14.3	15.6	22.5	190	20.3	18.2	26.3	28.72	15.6	45	50	9
N379	011	1978	190	14.3	15.6	22.5	190	21.9	19.0	27.4	28.72	15.6	45	50	9
N379	011	1979	190	14.3	15.6	22.5	190	24.3	20.0	29.4	28.72	15.6	45	50	9
N379	012	1975	320	18.1	15.6	21.2	320	19.3	16.0	22.1	27.32	15.6	0	0	9
N379	012	1976	320	18.1	15.6	21.2	320	22.4	17.0	23.2	27.32	15.6	0	0	9
N379	012	1977	320	18.1	15.6	21.2	320	25.4	18.2	25.0	27.32	15.6	0	0	9
N379	012	1978	320	18.1	15.6	21.2	320	27.6	19.0	25.9	27.32	15.6	0	0	9
N379	012	1979	320	18.1	15.6	21.2	320	31.3	20.0	27.3	27.32	15.6	0	0	9

Appendix 6. Stand growth data for operationally fertilized stands.

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N404	001	1977	140	10.6	15.3	20.0	140	13.3	17.2	23.0	26.17	15.3	200	100	4
N404	001	1979	140	10.6	15.3	20.0	140	20.0	21.2	27.7	26.17	15.3	200	100	4
N404	002	1977	130	7.2	15.3	18.4	130	10.5	17.2	20.1	24.38	15.3	200	100	4
N404	002	1979	130	7.2	15.3	18.4	130	16.7	21.2	24.6	24.38	15.3	200	100	4
N404	003	1977	130	7.8	15.3	19.4	130	10.3	17.2	21.8	25.50	15.3	200	100	4
N404	003	1979	130	7.8	15.3	19.4	120	15.4	21.2	27.1	25.50	15.3	200	100	4
N404	004	1977	150	7.3	15.3	17.2	150	10.5	17.2	19.9	23.01	15.3	200	100	4
N446	767	1977	210	14.3	15.0	20.4	210	18.9	17.2	23.8	26.80	16.3	200	100	0
N446	767	1979	210	14.3	15.0	20.4	210	22.9	19.1	26.8	26.80	16.3	200	100	0
N446	767	1981	210	14.3	15.0	20.4	210	26.6	21.0	28.9	26.80	16.3	200	100	0
N446	768	1977	190	9.9	15.0	18.4	190	13.9	17.2	20.6	24.60	16.3	200	100	0
N446	768	1979	190	9.9	15.0	18.4	190	17.6	19.1	24.0	24.60	16.3	200	100	0
N446	768	1981	190	9.9	15.0	18.4	190	21.7	21.2	26.2	24.60	16.3	200	100	0
N446	775	1977	210	12.3	14.1	19.0	210	14.4	15.0	20.6	27.39	14.3	200	96	$
N446	775	1978	210	12.3	14.1	19.0	210	26.6	19.7	26.7	27.39	14.3	200	96	$
N446	775	1983	210	12.3	14.1	19.0	210	27.6	20.2	26.4	27.39	14.3	200	96	$
N446	772	1978	240	8.7	14.0	15.9	240	13.8	17.2	20.5	23.93	14.3	100	50	0
N446	772	1978	240	8.7	14.0	15.9	240	17.7	19.2	22.4	23.93	14.3	100	50	0

Appendix 7. Sectional measurement data for Golden Downs.
(80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	001	001	1973	12.3	13.7	0.70	12.7	12.94
N262	001	001	1973	11.5	12.7	1.40	12.7	12.94
N262	001	001	1973	10.6	11.4	2.47	12.7	12.94
N262	001	001	1973	9.4	10.2	4.08	12.7	12.94
N262	001	001	1973	8.4	8.9	5.82	12.7	12.94
N262	001	001	1973	5.8	6.3	8.32	12.7	12.94
N262	001	001	1973	4.6	5.1	9.75	12.7	12.94
N262	001	001	1973	3.3	3.8	10.97	12.7	12.94
N262	001	001	1973	2.2	2.5	12.04	12.7	12.94
N262	001	016	1973	18.2	20.6	0.00	18.0	13.86
N262	001	016	1973	17.1	19.3	0.70	18.0	13.86
N262	001	016	1973	14.2	15.2	3.23	18.0	13.86
N262	001	016	1973	12.2	13.0	5.70	18.0	13.86
N262	001	016	1973	6.8	7.6	10.06	18.0	13.86
N262	001	016	1973	4.8	5.3	11.73	18.0	13.86
N262	001	016	1973	2.5	3.0	12.95	18.0	13.86
N262	001	021	1973	20.9	24.4	0.00	22.4	16.66
N262	001	021	1973	20.4	23.4	0.70	22.4	16.66
N262	001	021	1973	19.9	22.4	1.40	22.4	16.66
N262	001	021	1973	17.8	19.8	2.62	22.4	16.66
N262	001	021	1973	15.7	17.3	4.79	22.4	16.66
N262	001	021	1973	13.7	14.7	7.32	22.4	16.66
N262	001	021	1973	11.2	12.2	9.36	22.4	16.66
N262	001	021	1973	8.7	9.7	11.03	22.4	16.66
N262	001	021	1973	3.5	3.8	15.06	22.4	16.66
N262	001	025	1973	13.1	15.0	0.00	14.0	15.23
N262	001	025	1973	12.9	14.5	0.70	14.0	15.23
N262	001	025	1973	12.7	14.0	1.40	14.0	15.23
N262	001	025	1973	11.7	12.7	3.63	14.0	15.23
N262	001	025	1973	9.3	10.2	7.62	14.0	15.23
N262	001	025	1973	8.1	8.9	8.99	14.0	15.23
N262	001	025	1973	6.8	7.6	10.27	14.0	15.23
N262	001	025	1973	5.5	6.3	11.19	14.0	15.23
N262	001	025	1973	4.6	5.1	12.59	14.0	15.23
N262	001	025	1973	3.3	3.8	13.59	14.0	15.23
N262	001	027	1973	22.7	26.3	0.00	22.9	16.14
N262	001	027	1973	21.5	24.6	0.70	22.9	16.14
N262	001	027	1973	20.3	22.9	1.40	22.9	16.14
N262	001	027	1973	18.8	20.8	2.44	22.9	16.14
N262	001	027	1973	17.0	18.3	4.42	22.9	16.14
N262	001	027	1973	13.9	15.2	7.38	22.9	16.14
N262	001	027	1973	11.7	12.7	9.14	22.9	16.14
N262	001	027	1973	6.8	7.6	12.31	22.9	16.14
N262	001	027	1973	2.0	2.5	15.24	22.9	16.14
N262	001	042	1973	25.8	29.5	0.00	24.9	17.76
N262	001	042	1973	24.0	27.2	0.70	24.9	17.76
N262	001	042	1973	20.5	22.9	2.19	24.9	17.76
N262	001	042	1973	18.2	19.8	4.27	24.9	17.76
N262	001	042	1973	16.0	17.3	6.83	24.9	17.76
N262	001	042	1973	13.7	14.7	9.08	24.9	17.76

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	001	042	1973	11.2	12.2	10.64	24.9	17.76
N262	001	042	1973	8.7	9.7	12.68	24.9	17.76
N262	001	042	1973	4.0	4.6	15.70	24.9	17.76
N262	001	042	1973	2.7	3.0	16.52	24.9	17.76
N262	001	045	1973	24.6	28.4	0.00	25.4	16.97
N262	001	045	1973	23.5	26.9	0.70	25.4	16.97
N262	001	045	1973	22.3	25.4	1.40	25.4	16.97
N262	001	045	1973	20.7	22.9	2.68	25.4	16.97
N262	001	045	1973	18.6	20.3	3.66	25.4	16.97
N262	001	045	1973	16.3	17.8	5.30	25.4	16.97
N262	001	045	1973	11.7	12.7	8.84	25.4	16.97
N262	001	045	1973	9.2	10.2	10.42	25.4	16.97
N262	001	045	1973	6.6	7.6	12.65	25.4	16.97
N262	001	045	1973	2.5	3.0	15.45	25.4	16.97
N262	001	048	1973	16.2	18.8	0.00	16.8	14.25
N262	001	048	1973	15.5	17.8	0.70	16.8	14.25
N262	001	048	1973	14.7	16.8	1.40	16.8	14.25
N262	001	048	1973	10.7	11.7	5.61	16.8	14.25
N262	001	048	1973	8.3	9.1	7.65	16.8	14.25
N262	001	048	1973	5.8	6.6	10.70	16.8	14.25
N262	001	059	1973	13.6	16.0	0.00	14.0	14.02
N262	001	059	1973	13.1	15.0	0.70	14.0	14.02
N262	001	059	1973	12.6	14.0	1.40	14.0	14.02
N262	001	059	1973	11.7	12.7	3.02	14.0	14.02
N262	001	059	1973	10.6	11.4	3.90	14.0	14.02
N262	001	059	1973	9.6	10.2	6.19	14.0	14.02
N262	001	059	1973	8.4	8.9	7.22	14.0	14.02
N262	001	059	1973	7.1	7.6	8.75	14.0	14.02
N262	001	059	1973	5.8	6.3	10.06	14.0	14.02
N262	002	009	1973	11.0	12.7	0.00	11.7	13.52
N262	002	009	1973	10.7	12.2	0.70	11.7	13.52
N262	002	009	1973	10.4	11.7	1.40	11.7	13.52
N262	002	009	1973	9.6	10.4	2.68	11.7	13.52
N262	002	009	1973	8.3	9.1	4.42	11.7	13.52
N262	002	009	1973	4.8	5.3	8.84	11.7	13.52
N262	002	009	1973	3.6	4.1	10.06	11.7	13.52
N262	002	012	1973	12.7	13.6	0.00	12.4	13.22
N262	002	012	1973	12.1	13.0	0.70	12.4	13.22
N262	002	012	1973	11.6	12.4	1.40	12.4	13.22
N262	002	012	1973	10.2	11.2	3.14	12.4	13.22
N262	002	012	1973	7.8	8.6	5.85	12.4	13.22
N262	002	012	1973	6.6	7.4	7.32	12.4	13.22
N262	002	012	1973	5.6	6.1	8.90	12.4	13.22
N262	002	012	1973	3.3	3.6	11.28	12.4	13.22
N262	002	017	1973	15.1	17.0	0.00	15.0	13.16
N262	002	017	1973	14.2	16.0	0.70	15.0	13.16
N262	002	017	1973	13.3	15.0	1.40	15.0	13.16
N262	002	017	1973	12.5	14.0	1.86	15.0	13.16
N262	002	017	1973	11.3	12.4	3.20	15.0	13.16
N262	002	017	1973	10.2	11.2	3.96	15.0	13.16

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	002	017	1973	9.1	9.9	5.30	15.0	13.16
N262	002	017	1973	6.6	7.4	7.62	15.0	13.16
N262	002	017	1973	4.3	4.8	10.30	15.0	13.16
N262	002	017	1973	2.5	3.0	11.89	15.0	13.16
N262	002	019	1973	12.2	14.4	0.00	13.0	12.85
N262	002	019	1973	12.0	13.7	0.70	13.0	12.85
N262	002	019	1973	9.4	10.4	4.72	13.0	12.85
N262	002	019	1973	8.1	9.1	5.82	13.0	12.85
N262	002	019	1973	7.1	7.9	7.01	13.0	12.85
N262	002	019	1973	5.8	6.6	8.26	13.0	12.85
N262	002	019	1973	4.5	5.3	9.27	13.0	12.85
N262	002	019	1973	3.6	4.1	10.73	13.0	12.85
N262	002	035	1973	22.0	24.4	0.00	22.4	15.36
N262	002	035	1973	21.4	23.4	0.70	22.4	15.36
N262	002	035	1973	18.5	19.8	2.68	22.4	15.36
N262	002	035	1973	16.2	17.3	4.08	22.4	15.36
N262	002	035	1973	13.7	14.7	5.79	22.4	15.36
N262	002	035	1973	11.2	12.2	7.68	22.4	15.36
N262	002	035	1973	8.7	9.7	9.85	22.4	15.36
N262	002	035	1973	6.3	7.1	11.34	22.4	15.36
N262	002	036	1973	22.0	23.9	0.00	21.3	14.68
N262	002	036	1973	20.7	22.6	0.70	21.3	14.68
N262	002	036	1973	19.4	21.3	1.40	21.3	14.68
N262	002	036	1973	17.3	18.8	3.14	21.3	14.68
N262	002	036	1973	12.7	13.7	6.52	21.3	14.68
N262	002	036	1973	10.2	11.2	8.08	21.3	14.68
N262	002	036	1973	7.6	8.4	9.94	21.3	14.68
N262	002	036	1973	3.3	3.6	13.75	21.3	14.68
N262	002	039	1973	27.0	29.2	0.00	20.6	14.45
N262	002	039	1973	23.0	24.9	0.70	20.6	14.45
N262	002	039	1973	19.0	20.6	1.40	20.6	14.45
N262	002	039	1973	16.5	17.8	3.57	20.6	14.45
N262	002	039	1973	12.0	13.0	6.55	20.6	14.45
N262	002	039	1973	9.4	10.4	8.29	20.6	14.45
N262	002	039	1973	4.8	5.3	11.98	20.6	14.45
N262	002	039	1973	3.0	3.3	13.35	20.6	14.45
N262	002	053	1973	21.6	24.1	0.00	23.1	14.26
N262	002	053	1973	21.2	23.6	0.70	23.1	14.26
N262	002	053	1973	20.8	23.1	1.40	23.1	14.26
N262	002	053	1973	17.4	18.8	3.47	23.1	14.26
N262	002	053	1973	13.9	15.0	5.33	23.1	14.26
N262	002	053	1973	11.9	13.0	6.61	23.1	14.26
N262	002	053	1973	9.2	10.2	8.08	23.1	14.26
N262	002	053	1973	7.4	8.4	9.60	23.1	14.26
N262	002	053	1973	4.8	5.3	11.22	23.1	14.26
N262	002	059	1973	15.8	16.8	0.70	16.0	12.50
N262	002	059	1973	15.0	16.0	1.40	16.0	12.50
N262	002	059	1973	13.7	14.7	2.35	16.0	12.50
N262	002	059	1973	12.6	13.5	3.66	16.0	12.50
N262	002	059	1973	11.0	11.9	4.63	16.0	12.50

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	002	059	1973	8.6	9.4	7.16	16.0	12.50
N262	002	059	1973	7.7	8.4	8.38	16.0	12.50
N262	002	059	1973	6.4	6.9	9.45	16.0	12.50
N262	002	059	1973	5.1	5.6	10.21	16.0	12.50
N262	002	059	1973	3.8	4.3	10.97	16.0	12.50
N262	003	007	1973	14.4	16.0	0.00	14.0	12.40
N262	003	007	1973	13.6	15.0	0.70	14.0	12.40
N262	003	007	1973	11.7	12.7	2.44	14.0	12.40
N262	003	007	1973	10.4	11.4	3.66	14.0	12.40
N262	003	007	1973	8.1	8.9	6.28	14.0	12.40
N262	003	007	1973	6.8	7.6	7.19	14.0	12.40
N262	003	007	1973	6.1	6.6	8.11	14.0	12.40
N262	003	007	1973	4.8	5.3	9.24	14.0	12.40
N262	003	007	1973	3.3	3.8	10.58	14.0	12.40
N262	003	016	1973	11.9	13.7	0.00	11.7	11.27
N262	003	016	1973	11.3	12.7	0.70	11.7	11.27
N262	003	016	1973	10.7	11.7	1.40	11.7	11.27
N262	003	016	1973	9.9	10.7	2.74	11.7	11.27
N262	003	016	1973	7.4	7.9	6.61	11.7	11.27
N262	003	016	1973	5.8	6.3	8.08	11.7	11.27
N262	003	016	1973	4.1	4.6	9.63	11.7	11.27
N262	003	017	1973	13.2	14.9	0.00	14.5	13.80
N262	003	017	1973	13.2	14.7	0.70	14.5	13.80
N262	003	017	1973	13.1	14.5	1.40	14.5	13.80
N262	003	017	1973	12.2	13.0	2.19	14.5	13.80
N262	003	017	1973	11.4	12.2	3.11	14.5	13.80
N262	003	017	1973	9.6	10.4	5.12	14.5	13.80
N262	003	017	1973	6.4	6.9	9.17	14.5	13.80
N262	003	017	1973	5.1	5.6	10.18	14.5	13.80
N262	003	017	1973	3.6	4.1	11.43	14.5	13.80
N262	003	017	1973	2.5	3.0	12.53	14.5	13.80
N262	003	021	1973	10.2	11.0	0.00	10.4	12.64
N262	003	021	1973	9.9	10.7	0.70	10.4	12.64
N262	003	021	1973	9.6	10.4	1.40	10.4	12.64
N262	003	021	1973	8.3	9.1	3.66	10.4	12.64
N262	003	021	1973	6.1	6.6	7.62	10.4	12.64
N262	003	021	1973	3.6	4.1	10.42	10.4	12.64
N262	003	021	1973	2.3	2.8	11.43	10.4	12.64
N262	003	028	1973	15.5	18.1	0.00	15.5	12.73
N262	003	028	1973	14.6	16.8	0.70	15.5	12.73
N262	003	028	1973	13.5	14.5	2.13	15.5	12.73
N262	003	028	1973	10.9	11.7	4.24	15.5	12.73
N262	003	028	1973	9.9	10.7	5.21	15.5	12.73
N262	003	028	1973	8.3	9.1	6.89	15.5	12.73
N262	003	028	1973	7.1	7.9	7.83	15.5	12.73
N262	003	028	1973	5.5	6.3	9.14	15.5	12.73
N262	003	028	1973	4.6	5.1	10.27	15.5	12.73
N262	003	028	1973	3.6	4.1	10.73	15.5	12.73
N262	003	033	1973	16.4	19.2	0.00	16.8	13.58
N262	003	033	1973	15.5	18.0	0.70	16.8	13.58

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	003	033	1973	14.7	16.8	1.40	16.8	13.58
N262	003	033	1973	14.0	15.5	2.10	16.8	13.58
N262	003	033	1973	13.0	14.5	3.14	16.8	13.58
N262	003	033	1973	10.7	11.7	5.49	16.8	13.58
N262	003	033	1973	6.8	7.6	8.66	16.8	13.58
N262	003	033	1973	5.8	6.6	9.63	16.8	13.58
N262	003	033	1973	4.8	5.3	10.64	16.8	13.58
N262	003	033	1973	3.6	4.1	11.58	16.8	13.58
N262	003	051	1973	8.9	10.7	0.00	9.7	10.78
N262	003	051	1973	8.8	10.2	0.70	9.7	10.78
N262	003	051	1973	8.7	9.7	1.40	9.7	10.78
N262	003	051	1973	7.6	8.4	2.68	9.7	10.78
N262	003	051	1973	5.3	5.8	6.31	9.7	10.78
N262	003	051	1973	2.8	3.3	9.30	9.7	10.78
N262	003	051	1973	2.0	2.5	9.85	9.7	10.78
N262	003	055	1973	23.2	26.1	0.00	22.1	14.96
N262	003	055	1973	21.5	24.1	0.70	22.1	14.96
N262	003	055	1973	19.8	22.1	1.40	22.1	14.96
N262	003	055	1973	18.0	19.8	2.59	22.1	14.96
N262	003	055	1973	13.7	14.7	5.79	22.1	14.96
N262	003	055	1973	10.9	11.9	7.53	22.1	14.96
N262	003	055	1973	6.1	6.9	11.13	22.1	14.96
N262	003	055	1973	4.1	4.6	12.89	22.1	14.96
N262	003	056	1973	19.9	22.9	0.00	20.3	16.05
N262	003	056	1973	19.0	21.6	0.70	20.3	16.05
N262	003	056	1973	18.1	20.3	1.40	20.3	16.05
N262	003	056	1973	14.5	15.5	5.73	20.3	16.05
N262	003	056	1973	11.7	12.7	7.16	20.3	16.05
N262	003	056	1973	9.2	10.2	9.33	20.3	16.05
N262	003	056	1973	6.6	7.6	11.58	20.3	16.05
N262	003	056	1973	4.3	5.1	13.08	20.3	16.05
N262	004	021	1973	14.7	17.0	0.70	16.0	11.15
N262	004	021	1973	13.9	16.0	1.40	16.0	11.15
N262	004	021	1973	13.7	14.7	2.07	16.0	11.15
N262	004	021	1973	13.0	14.0	2.56	16.0	11.15
N262	004	021	1973	9.2	10.2	4.21	16.0	11.15
N262	004	021	1973	8.9	9.7	4.97	16.0	11.15
N262	004	021	1973	7.6	8.4	5.52	16.0	11.15
N262	004	021	1973	6.3	7.1	7.32	16.0	11.15
N262	004	021	1973	5.6	6.1	8.14	16.0	11.15
N262	004	021	1973	4.1	4.6	9.20	16.0	11.15
N262	004	022	1973	9.4	10.2	0.70	9.4	10.44
N262	004	022	1973	8.8	9.4	1.40	9.4	10.44
N262	004	022	1973	6.6	7.1	4.42	9.4	10.44
N262	004	022	1973	5.3	5.8	6.43	9.4	10.44
N262	004	022	1973	4.1	4.6	7.77	9.4	10.44
N262	004	022	1973	2.8	3.3	8.63	9.4	10.44
N262	004	022	1973	2.0	2.5	9.24	9.4	10.44
N262	004	023	1973	19.3	22.2	0.00	18.0	11.05
N262	004	023	1973	17.6	20.1	0.70	18.0	11.05

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	004	023	1973	15.8	18.0	1.40	18.0	11.05
N262	004	023	1973	14.2	15.7	2.50	18.0	11.05
N262	004	023	1973	12.0	13.0	3.96	18.0	11.05
N262	004	023	1973	9.6	10.4	5.49	18.0	11.05
N262	004	023	1973	7.1	7.9	6.71	18.0	11.05
N262	004	027	1973	12.0	13.8	0.00	12.2	11.51
N262	004	027	1973	11.5	13.0	0.70	12.2	11.51
N262	004	027	1973	10.9	12.2	1.40	12.2	11.51
N262	004	027	1973	8.9	9.7	3.23	12.2	11.51
N262	004	027	1973	7.6	8.4	4.33	12.2	11.51
N262	004	027	1973	6.3	7.1	5.58	12.2	11.51
N262	004	027	1973	5.3	5.8	7.32	12.2	11.51
N262	004	027	1973	4.1	4.6	8.32	12.2	11.51
N262	004	029	1973	12.5	14.8	0.00	12.2	10.51
N262	004	029	1973	10.8	12.2	1.40	12.2	10.51
N262	004	029	1973	10.1	10.9	2.23	12.2	10.51
N262	004	029	1973	9.2	9.7	3.14	12.2	10.51
N262	004	029	1973	7.9	8.4	4.02	12.2	10.51
N262	004	029	1973	5.3	5.8	7.13	12.2	10.51
N262	004	029	1973	4.1	4.6	7.92	12.2	10.51
N262	004	029	1973	3.1	3.6	9.36	12.2	10.51
N262	004	038	1973	15.7	17.9	0.00	14.7	11.69
N262	004	038	1973	12.9	14.7	1.40	14.7	11.69
N262	004	038	1973	12.2	13.5	2.16	14.7	11.69
N262	004	038	1973	10.2	11.2	3.81	14.7	11.69
N262	004	038	1973	8.7	9.7	4.48	14.7	11.69
N262	004	038	1973	7.4	8.4	5.82	14.7	11.69
N262	004	038	1973	6.1	7.1	7.59	14.7	11.69
N262	004	038	1973	4.8	5.8	8.75	14.7	11.69
N262	004	038	1973	4.1	4.6	9.81	14.7	11.69
N262	004	038	1973	2.5	3.0	10.61	14.7	11.69
N262	004	039	1973	15.9	18.6	0.00	17.0	12.58
N262	004	039	1973	14.7	17.0	1.40	17.0	12.58
N262	004	039	1973	13.4	14.7	2.23	17.0	12.58
N262	004	039	1973	11.7	13.0	3.05	17.0	12.58
N262	004	039	1973	10.9	11.9	4.15	17.0	12.58
N262	004	039	1973	6.1	6.9	7.77	17.0	12.58
N262	004	039	1973	3.8	4.3	10.24	17.0	12.58
N262	004	039	1973	2.8	3.3	11.06	17.0	12.58
N262	004	101	1973	19.8	22.5	0.00	21.1	13.95
N262	004	101	1973	19.4	21.8	0.70	21.1	13.95
N262	004	101	1973	19.0	21.1	1.40	21.1	13.95
N262	004	101	1973	15.0	16.0	4.11	21.1	13.95
N262	004	101	1973	12.2	13.2	5.79	21.1	13.95
N262	004	101	1973	9.4	10.4	7.28	21.1	13.95
N262	004	101	1973	5.3	5.8	10.97	21.1	13.95
N262	004	101	1973	3.3	3.8	12.50	21.1	13.95
N262	004	102	1973	24.1	26.9	0.00	22.9	12.79
N262	004	102	1973	22.3	24.9	0.70	22.9	12.79
N262	004	102	1973	20.5	22.9	1.40	22.9	12.79

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	004	102	1973	18.3	20.3	2.38	22.9	12.79
N262	004	102	1973	16.1	17.8	3.63	22.9	12.79
N262	004	102	1973	13.9	15.2	4.94	22.9	12.79
N262	004	102	1973	11.7	12.7	6.22	22.9	12.79
N262	004	102	1973	6.8	7.6	8.53	22.9	12.79
N262	004	102	1973	2.8	3.3	12.16	22.9	12.79
N262	005	002	1973	15.9	18.8	0.00	16.8	13.22
N262	005	002	1973	15.0	16.8	1.40	16.8	13.22
N262	005	002	1973	14.2	15.2	2.44	16.8	13.22
N262	005	002	1973	13.4	14.2	3.35	16.8	13.22
N262	005	002	1973	10.9	11.7	5.52	16.8	13.22
N262	005	002	1973	8.3	9.1	7.38	16.8	13.22
N262	005	002	1973	3.6	4.1	10.97	16.8	13.22
N262	005	024	1973	15.2	16.8	0.70	16.0	14.19
N262	005	024	1973	14.8	16.0	1.40	16.0	14.19
N262	005	024	1973	13.7	14.7	2.35	16.0	14.19
N262	005	024	1973	11.4	12.2	5.61	16.0	14.19
N262	005	024	1973	10.1	10.9	7.01	16.0	14.19
N262	005	024	1973	8.9	9.7	8.50	16.0	14.19
N262	005	024	1973	6.6	7.1	10.42	16.0	14.19
N262	005	024	1973	5.3	5.8	11.31	16.0	14.19
N262	005	024	1973	4.1	4.6	12.10	16.0	14.19
N262	005	024	1973	3.0	3.3	12.80	16.0	14.19
N262	005	025	1973	12.5	15.0	0.70	13.5	11.18
N262	005	025	1973	11.5	13.5	1.40	13.5	11.18
N262	005	025	1973	11.4	12.7	1.92	13.5	11.18
N262	005	025	1973	9.9	10.9	2.99	13.5	11.18
N262	005	025	1973	8.7	9.7	4.27	13.5	11.18
N262	005	025	1973	7.6	8.4	5.21	13.5	11.18
N262	005	025	1973	6.3	7.1	6.40	13.5	11.18
N262	005	025	1973	4.6	5.1	8.17	13.5	11.18
N262	005	025	1973	2.8	3.3	8.75	13.5	11.18
N262	005	039	1973	9.8	12.5	0.00	10.9	10.75
N262	005	039	1973	9.5	11.7	0.70	10.9	10.75
N262	005	039	1973	9.2	10.9	1.40	10.9	10.75
N262	005	039	1973	8.7	9.7	2.90	10.9	10.75
N262	005	039	1973	7.6	8.4	4.30	10.9	10.75
N262	005	039	1973	6.3	7.1	5.94	10.9	10.75
N262	005	039	1973	5.3	5.8	7.38	10.9	10.75
N262	005	051	1973	13.5	15.4	0.00	13.0	12.76
N262	005	051	1973	11.7	13.0	1.40	13.0	12.76
N262	005	051	1973	10.7	11.7	2.47	13.0	12.76
N262	005	051	1973	9.6	10.4	3.75	13.0	12.76
N262	005	051	1973	8.3	9.1	5.55	13.0	12.76
N262	005	051	1973	7.1	7.9	7.28	13.0	12.76
N262	005	051	1973	6.1	6.6	8.44	13.0	12.76
N262	005	051	1973	3.6	4.1	10.55	13.0	12.76
N262	005	051	1973	2.5	3.0	11.06	13.0	12.76
N262	005	101	1973	20.1	23.4	0.70	22.1	15.26
N262	005	101	1973	18.0	20.3	2.10	22.1	15.26

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	005	101	1973	17.0	18.5	2.68	22.1	15.26
N262	005	101	1973	15.5	17.0	3.72	22.1	15.26
N262	005	101	1973	13.9	15.2	5.61	22.1	15.26
N262	005	101	1973	12.2	13.5	6.13	22.1	15.26
N262	005	101	1973	11.7	12.7	7.35	22.1	15.26
N262	005	101	1973	8.4	9.4	9.72	22.1	15.26
N262	005	101	1973	3.8	4.3	13.35	22.1	15.26
N262	005	101	1973	2.8	3.3	14.05	22.1	15.26
N262	005	102	1973	18.6	21.2	0.00	19.0	15.23
N262	005	102	1973	17.8	20.1	0.70	19.0	15.23
N262	005	102	1973	15.0	16.5	2.87	19.0	15.23
N262	005	102	1973	12.7	14.0	3.96	19.0	15.23
N262	005	102	1973	7.9	8.9	9.57	19.0	15.23
N262	005	102	1973	5.5	6.3	11.89	19.0	15.23
N262	005	102	1973	4.3	4.8	13.35	19.0	15.23
N262	005	102	1973	2.3	2.8	14.02	19.0	15.23
N262	005	103	1973	24.0	27.9	0.00	20.3	13.61
N262	005	103	1973	20.7	24.1	0.70	20.3	13.61
N262	005	103	1973	15.8	17.8	2.38	20.3	13.61
N262	005	103	1973	14.0	15.5	3.57	20.3	13.61
N262	005	103	1973	11.7	12.7	5.70	20.3	13.61
N262	005	103	1973	9.4	10.4	7.53	20.3	13.61
N262	005	103	1973	4.3	5.1	11.19	20.3	13.61
N262	005	103	1973	2.8	3.3	12.28	20.3	13.61
N262	005	104	1973	19.8	22.9	0.00	19.3	14.62
N262	005	104	1973	16.7	19.3	1.40	19.3	14.62
N262	005	104	1973	13.0	14.0	4.69	19.3	14.62
N262	005	104	1973	10.7	11.7	7.10	19.3	14.62
N262	005	104	1973	8.3	9.1	8.93	19.3	14.62
N262	005	104	1973	5.8	6.6	10.55	19.3	14.62
N262	005	104	1973	3.6	4.1	12.68	19.3	14.62
N262	006	002	1973	21.5	24.4	0.70	22.4	14.86
N262	006	002	1973	20.3	22.4	1.40	22.4	14.86
N262	006	002	1973	18.3	19.8	2.44	22.4	14.86
N262	006	002	1973	16.2	17.3	3.99	22.4	14.86
N262	006	002	1973	14.2	15.2	5.64	22.4	14.86
N262	006	002	1973	11.8	12.7	7.22	22.4	14.86
N262	006	002	1973	8.3	9.1	9.78	22.4	14.86
N262	006	002	1973	7.4	7.9	10.30	22.4	14.86
N262	006	002	1973	3.3	3.8	13.01	22.4	14.86
N262	006	009	1973	10.9	12.2	0.00	11.2	13.34
N262	006	009	1973	10.7	11.7	0.70	11.2	13.34
N262	006	009	1973	10.5	11.2	1.40	11.2	13.34
N262	006	009	1973	9.1	9.9	3.99	11.2	13.34
N262	006	009	1973	7.8	8.6	5.73	11.2	13.34
N262	006	009	1973	6.9	7.4	7.10	11.2	13.34
N262	006	009	1973	5.6	6.1	8.69	11.2	13.34
N262	006	015	1973	21.0	24.4	0.00	20.8	15.47
N262	006	015	1973	18.3	20.8	1.40	20.8	15.47
N262	006	015	1973	17.3	18.8	3.20	20.8	15.47

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	006	015	1973	12.2	13.2	7.25	20.8	15.47
N262	006	015	1973	9.7	10.7	8.53	20.8	15.47
N262	006	015	1973	7.3	8.1	9.97	20.8	15.47
N262	006	015	1973	5.1	5.6	12.25	20.8	15.47
N262	006	015	1973	2.8	3.3	13.90	20.8	15.47
N262	006	034	1973	17.5	19.5	0.00	17.5	14.19
N262	006	034	1973	16.8	18.5	0.70	17.5	14.19
N262	006	034	1973	16.0	17.5	1.40	17.5	14.19
N262	006	034	1973	13.9	15.0	3.38	17.5	14.19
N262	006	034	1973	9.1	9.9	7.71	17.5	14.19
N262	006	034	1973	4.3	5.1	11.43	17.5	14.19
N262	006	034	1973	2.8	3.3	12.86	17.5	14.19
N262	006	040	1973	14.0	16.0	0.00	14.0	12.97
N262	006	040	1973	13.4	15.0	0.70	14.0	12.97
N262	006	040	1973	12.7	14.0	1.40	14.0	12.97
N262	006	040	1973	11.9	12.7	2.44	14.0	12.97
N262	006	040	1973	10.6	11.4	3.72	14.0	12.97
N262	006	040	1973	8.4	8.9	6.00	14.0	12.97
N262	006	040	1973	7.1	7.6	8.02	14.0	12.97
N262	006	040	1973	5.8	6.3	9.30	14.0	12.97
N262	006	040	1973	3.3	3.8	11.19	14.0	12.97
N262	006	042	1973	19.0	21.7	0.00	18.5	13.92
N262	006	042	1973	17.7	20.1	0.70	18.5	13.92
N262	006	042	1973	16.5	18.5	1.40	18.5	13.92
N262	006	042	1973	14.4	15.7	2.83	18.5	13.92
N262	006	042	1973	13.0	14.0	4.94	18.5	13.92
N262	006	042	1973	10.6	11.4	6.86	18.5	13.92
N262	006	042	1973	2.8	3.3	12.62	18.5	13.92
N262	006	047	1973	18.0	20.8	0.00	19.8	13.50
N262	006	047	1973	17.8	20.3	0.70	19.8	13.50
N262	006	047	1973	16.0	17.5	2.35	19.8	13.50
N262	006	047	1973	11.2	12.2	5.79	19.8	13.50
N262	006	047	1973	8.7	9.7	7.83	19.8	13.50
N262	006	047	1973	6.3	7.1	8.96	19.8	13.50
N262	006	047	1973	4.1	4.6	11.19	19.8	13.50
N262	006	047	1973	2.5	3.0	12.68	19.8	13.50
N262	006	051	1973	26.9	30.2	0.00	26.2	15.17
N262	006	051	1973	23.7	26.2	1.40	26.2	15.17
N262	006	051	1973	21.7	23.6	2.44	26.2	15.17
N262	006	051	1973	18.6	20.1	3.66	26.2	15.17
N262	006	051	1973	17.8	19.3	4.48	26.2	15.17
N262	006	051	1973	15.0	16.0	5.70	26.2	15.17
N262	006	051	1973	12.5	13.5	7.32	26.2	15.17
N262	006	051	1973	9.9	10.9	8.87	26.2	15.17
N262	006	051	1973	7.6	8.4	10.49	26.2	15.17
N262	006	051	1973	2.8	3.3	14.20	26.2	15.17
N262	006	058	1973	12.4	14.0	0.70	12.4	11.69
N262	006	058	1973	11.2	12.4	1.40	12.4	11.69
N262	006	058	1973	10.4	11.2	2.53	12.4	11.69
N262	006	058	1973	9.1	9.9	3.57	12.4	11.69

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	006	058	1973	6.9	7.4	6.00	12.4	11.69
N262	006	058	1973	5.6	6.1	7.47	12.4	11.69
N262	006	058	1973	4.3	4.8	8.63	12.4	11.69
N262	006	058	1973	3.1	3.6	9.69	12.4	11.69
N261	001	005	1973	56.4	65.5	0.00	62.5	45.92
N261	001	005	1973	55.6	64.0	0.70	62.5	45.92
N261	001	005	1973	54.7	62.5	1.40	62.5	45.92
N261	001	005	1973	52.2	59.9	1.83	62.5	45.92
N261	001	005	1973	50.3	57.4	2.68	62.5	45.92
N261	001	005	1973	47.9	52.3	5.55	62.5	45.92
N261	001	005	1973	46.6	49.8	9.20	62.5	45.92
N261	001	005	1973	44.3	47.2	10.94	62.5	45.92
N261	001	005	1973	40.1	42.2	18.96	62.5	45.92
N261	001	005	1973	37.4	39.6	22.31	62.5	45.92
N261	001	005	1973	35.1	37.1	24.84	62.5	45.92
N261	001	005	1973	32.3	34.5	27.16	62.5	45.92
N261	001	005	1973	30.1	32.0	29.93	62.5	45.92
N261	001	005	1973	27.8	29.5	31.82	62.5	45.92
N261	001	005	1973	25.1	26.9	33.31	62.5	45.92
N261	001	005	1973	18.0	19.3	37.22	62.5	45.92
N261	001	005	1973	15.7	16.8	39.01	62.5	45.92
N261	001	005	1973	13.2	14.2	40.69	62.5	45.92
N261	001	005	1973	8.1	9.1	42.89	62.5	45.92
N261	001	010	1973	35.2	46.2	0.00	44.2	37.85
N261	001	010	1973	36.1	44.2	1.40	44.2	37.85
N261	001	010	1973	33.4	41.7	1.83	44.2	37.85
N261	001	010	1973	32.4	39.1	2.83	44.2	37.85
N261	001	010	1973	31.6	36.6	4.05	44.2	37.85
N261	001	010	1973	28.9	31.5	8.69	44.2	37.85
N261	001	010	1973	26.8	29.0	11.34	44.2	37.85
N261	001	010	1973	23.3	25.1	18.59	44.2	37.85
N261	001	010	1973	22.3	23.9	19.99	44.2	37.85
N261	001	010	1973	19.8	21.3	25.48	44.2	37.85
N261	001	010	1973	17.5	18.8	27.74	44.2	37.85
N261	001	010	1973	15.0	16.3	30.42	44.2	37.85
N261	001	010	1973	10.2	11.2	33.62	44.2	37.85
N261	001	010	1973	7.6	8.6	35.27	44.2	37.85
N261	001	016	1973	49.9	58.9	0.70	56.4	43.85
N261	001	016	1973	48.8	56.4	1.40	56.4	43.85
N261	001	016	1973	47.8	53.8	2.90	56.4	43.85
N261	001	016	1973	44.1	48.8	4.51	56.4	43.85
N261	001	016	1973	43.2	46.2	6.64	56.4	43.85
N261	001	016	1973	38.5	40.9	13.90	56.4	43.85
N261	001	016	1973	36.3	38.6	16.55	56.4	43.85
N261	001	016	1973	34.0	36.1	19.84	56.4	43.85
N261	001	016	1973	31.6	33.5	22.95	56.4	43.85
N261	001	016	1973	29.1	31.0	24.73	56.4	43.85
N261	001	016	1973	26.6	28.4	28.50	56.4	43.85
N261	001	016	1973	24.2	25.9	29.35	56.4	43.85
N261	001	016	1973	19.4	20.8	34.44	56.4	43.85

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	001	016	1973	16.9	18.3	35.51	56.4	43.85
N261	001	016	1973	14.4	15.7	37.06	56.4	43.85
N261	001	016	1973	11.9	13.2	39.04	56.4	43.85
N261	001	016	1973	7.0	8.1	41.27	56.4	43.85
N261	001	016	1973	4.6	5.6	41.91	56.4	43.85
N261	001	032	1973	49.6	57.1	0.00	54.1	43.67
N261	001	032	1973	48.1	55.6	0.70	54.1	43.67
N261	001	032	1973	46.6	54.1	1.40	54.1	43.67
N261	001	032	1973	44.1	51.6	1.80	54.1	43.67
N261	001	032	1973	41.9	49.0	2.19	54.1	43.67
N261	001	032	1973	41.2	46.5	3.93	54.1	43.67
N261	001	032	1973	40.4	43.9	5.58	54.1	43.67
N261	001	032	1973	38.9	41.4	7.35	54.1	43.67
N261	001	032	1973	36.6	38.9	10.73	54.1	43.67
N261	001	032	1973	34.3	36.3	13.72	54.1	43.67
N261	001	032	1973	32.0	33.8	17.43	54.1	43.67
N261	001	032	1973	27.0	28.7	24.11	54.1	43.67
N261	001	032	1973	22.3	23.6	30.27	54.1	43.67
N261	001	032	1973	14.8	16.0	35.14	54.1	43.67
N261	001	032	1973	12.4	13.5	38.01	54.1	43.67
N261	001	032	1973	9.8	10.9	39.96	54.1	43.67
N261	001	032	1973	7.4	8.4	41.85	54.1	43.67
N261	001	033	1973	47.4	55.6	0.70	54.6	43.27
N261	001	033	1973	47.4	54.6	1.40	54.6	43.27
N261	001	033	1973	46.8	52.1	2.19	54.6	43.27
N261	001	033	1973	45.0	49.5	3.26	54.6	43.27
N261	001	033	1973	43.4	47.0	4.66	54.6	43.27
N261	001	033	1973	39.7	41.9	12.19	54.6	43.27
N261	001	033	1973	37.4	39.4	14.08	54.6	43.27
N261	001	033	1973	35.0	36.8	16.95	54.6	43.27
N261	001	033	1973	32.3	34.3	19.75	54.6	43.27
N261	001	033	1973	29.9	31.7	22.68	54.6	43.27
N261	001	033	1973	27.3	29.2	25.21	54.6	43.27
N261	001	033	1973	24.8	26.7	28.19	54.6	43.27
N261	001	033	1973	19.9	21.6	33.19	54.6	43.27
N261	001	033	1973	15.2	16.5	36.21	54.6	43.27
N261	001	033	1973	12.8	14.0	38.04	54.6	43.27
N261	001	033	1973	10.4	11.4	39.23	54.6	43.27
N261	001	033	1973	7.9	8.9	40.23	54.6	43.27
N261	001	033	1973	5.3	6.3	41.36	54.6	43.27
N261	002	004	1973	57.9	68.0	0.00	65.0	44.99
N261	002	004	1973	57.5	66.5	0.70	65.0	44.99
N261	002	004	1973	57.1	65.0	1.40	65.0	44.99
N261	002	004	1973	53.0	62.0	2.29	65.0	44.99
N261	002	004	1973	52.2	59.9	3.41	65.0	44.99
N261	002	004	1973	51.0	57.4	4.72	65.0	44.99
N261	002	004	1973	49.1	54.9	7.04	65.0	44.99
N261	002	004	1973	47.0	52.3	8.47	65.0	44.99
N261	002	004	1973	45.2	49.8	11.03	65.0	44.99
N261	002	004	1973	43.5	47.2	13.11	65.0	44.99

Appendix 7. Sectional measurement data for Golden Downs.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	002	004	1973	39.5	42.2	18.87	65.0	44.99
N261	002	004	1973	32.5	34.5	26.39	65.0	44.99
N261	002	004	1973	30.3	32.0	28.80	65.0	44.99
N261	002	004	1973	27.7	29.4	30.48	65.0	44.99
N261	002	004	1973	25.2	26.9	32.67	65.0	44.99
N261	002	004	1973	22.6	24.4	34.14	65.0	44.99
N261	002	004	1973	20.3	21.8	35.39	65.0	44.99
N261	002	004	1973	18.3	19.3	36.39	65.0	44.99
N261	002	004	1973	15.8	16.8	38.44	65.0	44.99
N261	002	004	1973	8.1	9.1	40.90	65.0	44.99
N261	002	007	1973	42.2	49.2	0.00	44.2	39.31
N261	002	007	1973	40.4	46.7	0.70	44.2	39.31
N261	002	007	1973	38.6	44.2	1.40	44.2	39.31
N261	002	007	1973	37.4	41.7	2.35	44.2	39.31
N261	002	007	1973	35.3	39.1	3.90	44.2	39.31
N261	002	007	1973	29.9	31.5	14.26	44.2	39.31
N261	002	007	1973	27.6	29.0	19.51	44.2	39.31
N261	002	007	1973	24.9	26.4	22.16	44.2	39.31
N261	002	007	1973	19.8	21.3	28.44	44.2	39.31
N261	002	007	1973	17.4	18.8	31.27	44.2	39.31
N261	002	007	1973	14.8	16.3	33.44	44.2	39.31
N261	002	007	1973	12.5	13.7	34.66	44.2	39.31
N261	002	007	1973	10.1	11.2	36.21	44.2	39.31
N261	002	007	1973	7.5	8.6	37.03	44.2	39.31
N261	002	008	1973	64.5	70.3	0.00	62.7	46.26
N261	002	008	1973	59.9	66.5	0.70	62.7	46.26
N261	002	008	1973	55.3	62.7	1.40	62.7	46.26
N261	002	008	1973	53.0	60.2	2.26	62.7	46.26
N261	002	008	1973	52.2	57.7	3.63	62.7	46.26
N261	002	008	1973	46.9	52.0	5.39	62.7	46.26
N261	002	008	1973	45.7	49.7	7.89	62.7	46.26
N261	002	008	1973	45.8	49.5	9.33	62.7	46.26
N261	002	008	1973	43.9	47.5	10.94	62.7	46.26
N261	002	008	1973	42.1	45.0	13.75	62.7	46.26
N261	002	008	1973	39.7	42.4	17.25	62.7	46.26
N261	002	008	1973	37.1	39.9	20.79	62.7	46.26
N261	002	008	1973	33.1	35.3	23.07	62.7	46.26
N261	002	008	1973	30.5	32.3	28.16	62.7	46.26
N261	002	008	1973	28.0	29.7	30.85	62.7	46.26
N261	002	008	1973	19.2	20.9	35.75	62.7	46.26
N261	002	008	1973	12.2	13.7	40.63	62.7	46.26
N261	002	008	1973	10.8	11.9	41.33	62.7	46.26
N261	002	008	1973	8.4	9.4	42.34	62.7	46.26
N261	002	008	1973	5.6	6.4	43.80	62.7	46.26
N261	002	014	1973	40.1	46.7	0.00	40.1	39.31
N261	002	014	1973	38.2	43.4	0.70	40.1	39.31
N261	002	014	1973	36.3	40.1	1.40	40.1	39.31
N261	002	014	1973	32.2	35.1	6.61	40.1	39.31
N261	002	014	1973	30.3	32.5	10.15	40.1	39.31
N261	002	014	1973	25.8	27.4	18.59	40.1	39.31

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	002	014	1973	23.4	24.9	23.84	40.1	39.31
N261	002	014	1973	18.6	19.8	28.22	40.1	39.31
N261	002	014	1973	16.2	17.3	30.54	40.1	39.31
N261	002	014	1973	13.7	14.7	34.05	40.1	39.31
N261	002	014	1973	11.2	12.2	35.27	40.1	39.31
N261	002	014	1973	8.7	9.7	36.58	40.1	39.31
N261	002	020	1973	58.0	68.1	0.00	63.5	47.90
N261	002	020	1973	56.5	65.8	0.70	63.5	47.90
N261	002	020	1973	54.9	63.5	1.40	63.5	47.90
N261	002	020	1973	52.7	61.0	2.47	63.5	47.90
N261	002	020	1973	51.5	58.4	3.47	63.5	47.90
N261	002	020	1973	49.9	55.9	4.15	63.5	47.90
N261	002	020	1973	47.7	53.3	5.97	63.5	47.90
N261	002	020	1973	46.8	50.8	9.14	63.5	47.90
N261	002	020	1973	42.8	45.7	15.85	63.5	47.90
N261	002	020	1973	40.3	43.2	18.84	63.5	47.90
N261	002	020	1973	33.5	35.6	27.37	63.5	47.90
N261	002	020	1973	31.2	33.0	29.26	63.5	47.90
N261	002	020	1973	28.7	30.5	31.09	63.5	47.90
N261	002	020	1973	26.2	27.9	33.50	63.5	47.90
N261	002	020	1973	21.3	22.9	36.33	63.5	47.90
N261	002	020	1973	18.8	20.3	38.47	63.5	47.90
N261	002	020	1973	13.7	15.2	40.87	63.5	47.90
N261	002	020	1973	11.3	12.7	42.37	63.5	47.90
N261	002	020	1973	9.1	10.2	43.40	63.5	47.90
N261	002	020	1973	6.6	7.6	44.56	63.5	47.90
N261	003	004	1973	56.6	64.3	0.70	61.0	39.46
N261	003	004	1973	53.1	61.0	1.40	61.0	39.46
N261	003	004	1973	49.9	58.4	1.83	61.0	39.46
N261	003	004	1973	46.4	53.3	2.59	61.0	39.46
N261	003	004	1973	44.2	48.3	5.52	61.0	39.46
N261	003	004	1973	43.0	45.7	8.14	61.0	39.46
N261	003	004	1973	40.8	43.2	12.89	61.0	39.46
N261	003	004	1973	35.9	38.1	17.59	61.0	39.46
N261	003	004	1973	33.7	35.6	20.12	61.0	39.46
N261	003	004	1973	31.2	33.0	22.46	61.0	39.46
N261	003	004	1973	29.0	30.5	24.72	61.0	39.46
N261	003	004	1973	26.4	27.9	26.73	61.0	39.46
N261	003	004	1973	24.1	25.4	28.47	61.0	39.46
N261	003	004	1973	21.6	22.9	29.57	61.0	39.46
N261	003	004	1973	19.1	20.3	30.94	61.0	39.46
N261	003	004	1973	16.7	17.8	32.31	61.0	39.46
N261	003	004	1973	14.2	15.2	34.75	61.0	39.46
N261	003	004	1973	11.7	12.7	35.45	61.0	39.46
N261	003	004	1973	4.8	5.6	36.33	61.0	39.46
N261	003	021	1973	42.0	48.2	0.00	43.2	42.57
N261	003	021	1973	39.7	45.7	0.70	43.2	42.57
N261	003	021	1973	37.3	43.2	1.40	43.2	42.57
N261	003	021	1973	34.3	40.6	2.13	43.2	42.57
N261	003	021	1973	32.9	38.1	3.57	43.2	42.57

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	003	021	1973	32.4	35.6	4.79	43.2	42.57
N261	003	021	1973	31.0	33.0	6.40	43.2	42.57
N261	003	021	1973	28.9	30.5	12.19	43.2	42.57
N261	003	021	1973	21.9	22.9	23.32	43.2	42.57
N261	003	021	1973	16.9	17.8	29.93	43.2	42.57
N261	003	021	1973	14.4	15.2	33.25	43.2	42.57
N261	003	021	1973	11.9	12.7	35.97	43.2	42.57
N261	003	021	1973	6.8	7.6	38.74	43.2	42.57
N261	003	021	1973	4.5	5.1	40.23	43.2	42.57
N261	003	022	1973	32.2	39.4	0.00	35.8	31.69
N261	003	022	1973	31.2	37.6	0.70	35.8	31.69
N261	003	022	1973	30.2	35.8	1.40	35.8	31.69
N261	003	022	1973	28.2	33.3	2.47	35.8	31.69
N261	003	022	1973	27.1	30.7	3.81	35.8	31.69
N261	003	022	1973	25.3	28.2	5.33	35.8	31.69
N261	003	022	1973	23.7	25.7	7.59	35.8	31.69
N261	003	022	1973	19.3	20.6	15.33	35.8	31.69
N261	003	022	1973	17.0	18.0	19.48	35.8	31.69
N261	003	022	1973	14.5	15.5	21.73	35.8	31.69
N261	003	022	1973	12.2	13.0	24.14	35.8	31.69
N261	003	022	1973	4.8	5.3	29.87	35.8	31.69
N261	003	023	1973	49.3	59.4	0.00	53.8	40.53
N261	003	023	1973	47.6	56.6	0.70	53.8	40.53
N261	003	023	1973	45.9	53.8	1.40	53.8	40.53
N261	003	023	1973	41.4	48.8	2.53	53.8	40.53
N261	003	023	1973	40.1	43.7	4.79	53.8	40.53
N261	003	023	1973	35.7	38.6	9.51	53.8	40.53
N261	003	023	1973	33.8	36.1	13.93	53.8	40.53
N261	003	023	1973	31.7	33.5	17.74	53.8	40.53
N261	003	023	1973	29.5	31.0	20.48	53.8	40.53
N261	003	023	1973	26.9	28.4	22.89	53.8	40.53
N261	003	023	1973	24.4	25.9	24.90	53.8	40.53
N261	003	023	1973	22.1	23.4	27.31	53.8	40.53
N261	003	023	1973	19.8	20.8	29.63	53.8	40.53
N261	003	023	1973	17.3	18.3	31.52	53.8	40.53
N261	003	023	1973	14.9	15.7	34.14	53.8	40.53
N261	003	023	1973	12.4	13.2	34.99	53.8	40.53
N261	003	023	1973	9.9	10.7	36.64	53.8	40.53
N261	003	023	1973	5.1	5.6	37.89	53.8	40.53
N261	003	027	1973	64.7	76.0	0.00	69.8	46.72
N261	003	027	1973	63.7	69.8	1.40	69.8	46.72
N261	003	027	1973	59.8	68.6	1.83	69.8	46.72
N261	003	027	1973	56.4	64.8	2.47	69.8	46.72
N261	003	027	1973	54.3	62.2	3.23	69.8	46.72
N261	003	027	1973	50.2	54.6	8.56	69.8	46.72
N261	003	027	1973	48.4	52.1	10.70	69.8	46.72
N261	003	027	1973	46.1	49.5	12.28	69.8	46.72
N261	003	027	1973	43.9	47.0	15.61	69.8	46.72
N261	003	027	1973	41.5	44.4	18.53	69.8	46.72
N261	003	027	1973	39.2	41.9	20.54	69.8	46.72

Appendix 7. Sectional measurement data for Golden Downs.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	003	027	1973	37.1	39.4	23.62	69.8	46.72
N261	003	027	1973	34.7	36.8	25.18	69.8	46.72
N261	003	027	1973	32.5	34.3	25.97	69.8	46.72
N261	003	027	1973	30.2	31.7	28.19	69.8	46.72
N261	003	027	1973	25.7	26.7	31.21	69.8	46.72
N261	003	027	1973	23.1	24.1	33.01	69.8	46.72
N261	003	027	1973	18.0	19.0	36.67	69.8	46.72
N261	003	027	1973	15.6	16.5	38.16	69.8	46.72
N261	003	027	1973	13.2	14.0	39.81	69.8	46.72
N261	003	027	1973	10.6	11.4	41.39	69.8	46.72
N261	003	027	1973	8.3	8.9	42.37	69.8	46.72
N261	004	014	1973	45.5	54.5	0.00	46.5	39.31
N261	004	014	1973	39.9	46.5	1.40	46.5	39.31
N261	004	014	1973	39.0	43.9	1.92	46.5	39.31
N261	004	014	1973	37.9	41.4	2.80	46.5	39.31
N261	004	014	1973	32.4	33.8	12.95	46.5	39.31
N261	004	014	1973	29.7	31.2	15.91	46.5	39.31
N261	004	014	1973	27.4	28.7	20.03	46.5	39.31
N261	004	014	1973	25.2	26.2	22.77	46.5	39.31
N261	004	014	1973	22.6	23.6	26.52	46.5	39.31
N261	004	014	1973	20.1	21.1	28.22	46.5	39.31
N261	004	014	1973	17.5	18.5	30.21	46.5	39.31
N261	004	014	1973	16.6	17.5	31.58	46.5	39.31
N261	004	014	1973	12.7	13.5	32.22	46.5	39.31
N261	004	014	1973	10.1	10.9	33.22	46.5	39.31
N261	004	014	1973	5.4	5.8	36.76	46.5	39.31
N261	004	016	1973	57.3	66.3	0.00	60.7	40.50
N261	004	016	1973	54.4	63.5	0.70	60.7	40.50
N261	004	016	1973	51.5	60.7	1.40	60.7	40.50
N261	004	016	1973	49.2	58.2	1.80	60.7	40.50
N261	004	016	1973	47.4	55.6	2.65	60.7	40.50
N261	004	016	1973	45.7	53.1	3.35	60.7	40.50
N261	004	016	1973	44.0	50.5	3.81	60.7	40.50
N261	004	016	1973	43.0	48.0	4.72	60.7	40.50
N261	004	016	1973	36.5	40.4	11.46	60.7	40.50
N261	004	016	1973	30.7	32.8	20.36	60.7	40.50
N261	004	016	1973	28.2	30.2	23.01	60.7	40.50
N261	004	016	1973	26.1	27.7	25.82	60.7	40.50
N261	004	016	1973	23.8	25.1	27.40	60.7	40.50
N261	004	016	1973	21.3	22.6	29.72	60.7	40.50
N261	004	016	1973	19.1	20.1	30.94	60.7	40.50
N261	004	016	1973	16.5	17.5	32.80	60.7	40.50
N261	004	016	1973	14.1	15.0	34.35	60.7	40.50
N261	004	016	1973	9.1	9.9	37.06	60.7	40.50
N261	004	016	1973	6.8	7.4	38.01	60.7	40.50
N261	004	021	1973	60.1	70.0	0.00	61.0	45.47
N261	004	021	1973	56.2	65.5	0.70	61.0	45.47
N261	004	021	1973	52.2	61.0	1.40	61.0	45.47
N261	004	021	1973	51.3	58.4	2.65	61.0	45.47
N261	004	021	1973	50.4	55.9	4.02	61.0	45.47

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	004	021	1973	44.4	48.3	10.30	61.0	45.47
N261	004	021	1973	40.9	43.2	16.25	61.0	45.47
N261	004	021	1973	38.5	40.6	19.23	61.0	45.47
N261	004	021	1973	36.1	38.1	21.40	61.0	45.47
N261	004	021	1973	33.6	35.6	24.60	61.0	45.47
N261	004	021	1973	31.0	33.0	26.30	61.0	45.47
N261	004	021	1973	28.8	30.5	28.01	61.0	45.47
N261	004	021	1973	26.4	27.9	30.48	61.0	45.47
N261	004	021	1973	24.0	25.4	32.37	61.0	45.47
N261	004	021	1973	21.6	22.9	34.69	61.0	45.47
N261	004	021	1973	19.3	20.3	36.06	61.0	45.47
N261	004	021	1973	16.8	17.8	37.34	61.0	45.47
N261	004	021	1973	9.9	10.7	39.53	61.0	45.47
N261	004	021	1973	9.4	10.2	40.60	61.0	45.47
N261	004	021	1973	4.3	5.1	43.19	61.0	45.47
N261	004	023	1973	50.2	58.4	0.00	50.8	39.25
N261	004	023	1973	47.1	54.6	0.70	50.8	39.25
N261	004	023	1973	44.0	50.8	1.40	50.8	39.25
N261	004	023	1973	41.4	48.3	1.58	50.8	39.25
N261	004	023	1973	39.9	45.7	2.87	50.8	39.25
N261	004	023	1973	39.5	43.2	5.39	50.8	39.25
N261	004	023	1973	35.7	38.1	8.90	50.8	39.25
N261	004	023	1973	33.4	35.6	12.25	50.8	39.25
N261	004	023	1973	31.2	33.0	16.34	50.8	39.25
N261	004	023	1973	29.0	30.5	18.62	50.8	39.25
N261	004	023	1973	24.1	25.4	23.47	50.8	39.25
N261	004	023	1973	21.6	22.9	26.33	50.8	39.25
N261	004	023	1973	19.3	20.3	28.19	50.8	39.25
N261	004	023	1973	14.2	15.2	31.61	50.8	39.25
N261	004	023	1973	9.4	10.2	33.31	50.8	39.25
N261	004	023	1973	6.8	7.6	34.81	50.8	39.25
N261	004	023	1973	4.3	5.1	36.33	50.8	39.25
N261	004	024	1973	65.3	73.1	0.00	67.1	45.50
N261	004	024	1973	61.3	70.1	0.70	67.1	45.50
N261	004	024	1973	57.3	67.1	1.40	67.1	45.50
N261	004	024	1973	54.7	64.5	1.83	67.1	45.50
N261	004	024	1973	49.7	56.9	5.49	67.1	45.50
N261	004	024	1973	47.2	54.4	6.25	67.1	45.50
N261	004	024	1973	46.0	51.8	8.63	67.1	45.50
N261	004	024	1973	44.3	49.3	10.67	67.1	45.50
N261	004	024	1973	42.4	46.7	12.98	67.1	45.50
N261	004	024	1973	41.0	44.2	16.37	67.1	45.50
N261	004	024	1973	39.1	41.7	19.87	67.1	45.50
N261	004	024	1973	36.6	39.1	21.85	67.1	45.50
N261	004	024	1973	34.6	36.6	23.65	67.1	45.50
N261	004	024	1973	32.3	34.0	24.90	67.1	45.50
N261	004	024	1973	29.9	31.5	27.04	67.1	45.50
N261	004	024	1973	27.7	29.0	29.20	67.1	45.50
N261	004	024	1973	25.2	26.4	31.58	67.1	45.50
N261	004	024	1973	20.3	21.3	35.69	67.1	45.50

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	004	024	1973	17.8	18.8	37.12	67.1	45.50
N261	004	024	1973	10.4	11.2	41.09	67.1	45.50
N261	004	024	1973	8.0	8.6	42.18	67.1	45.50
N261	004	024	1973	5.6	6.1	43.28	67.1	45.50
N261	005	001	1973	66.8	74.5	0.00	67.3	46.38
N261	005	001	1973	56.7	64.8	2.41	67.3	46.38
N261	005	001	1973	53.9	62.2	4.08	67.3	46.38
N261	005	001	1973	52.6	59.7	5.06	67.3	46.38
N261	005	001	1973	51.8	57.1	6.10	67.3	46.38
N261	005	001	1973	49.3	54.6	6.77	67.3	46.38
N261	005	001	1973	46.9	52.1	10.27	67.3	46.38
N261	005	001	1973	43.3	47.0	13.56	67.3	46.38
N261	005	001	1973	40.8	44.4	16.70	67.3	46.38
N261	005	001	1973	38.6	41.9	19.66	67.3	46.38
N261	005	001	1973	34.1	36.8	23.71	67.3	46.38
N261	005	001	1973	32.0	34.3	25.69	67.3	46.38
N261	005	001	1973	29.6	31.7	27.43	67.3	46.38
N261	005	001	1973	27.4	29.2	30.24	67.3	46.38
N261	005	001	1973	25.0	26.7	31.70	67.3	46.38
N261	005	001	1973	22.8	24.1	33.25	67.3	46.38
N261	005	001	1973	20.3	21.6	34.66	67.3	46.38
N261	005	001	1973	18.0	19.0	36.42	67.3	46.38
N261	005	001	1973	15.5	16.5	38.28	67.3	46.38
N261	005	001	1973	13.0	14.0	39.44	67.3	46.38
N261	005	001	1973	10.6	11.4	40.63	67.3	46.38
N261	005	001	1973	8.1	8.9	42.73	67.3	46.38
N261	005	002	1973	57.7	64.8	0.00	61.2	46.79
N261	005	002	1973	55.3	63.0	0.70	61.2	46.79
N261	005	002	1973	52.9	61.2	1.40	61.2	46.79
N261	005	002	1973	51.7	58.7	2.26	61.2	46.79
N261	005	002	1973	50.6	56.1	3.29	61.2	46.79
N261	005	002	1973	49.6	53.6	5.76	61.2	46.79
N261	005	002	1973	47.4	51.1	8.32	61.2	46.79
N261	005	002	1973	45.1	48.5	9.66	61.2	46.79
N261	005	002	1973	40.7	43.4	15.57	61.2	46.79
N261	005	002	1973	31.5	33.3	25.91	61.2	46.79
N261	005	002	1973	26.9	28.2	30.48	61.2	46.79
N261	005	002	1973	24.5	25.7	32.07	61.2	46.79
N261	005	002	1973	22.1	23.1	34.75	61.2	46.79
N261	005	002	1973	19.6	20.6	35.69	61.2	46.79
N261	005	002	1973	17.0	18.0	36.94	61.2	46.79
N261	005	002	1973	14.5	15.5	39.11	61.2	46.79
N261	005	002	1973	12.1	13.0	40.57	61.2	46.79
N261	005	002	1973	9.6	10.4	42.15	61.2	46.79
N261	005	002	1973	7.4	7.9	43.22	61.2	46.79
N261	005	002	1973	4.8	5.3	44.23	61.2	46.79
N261	005	009	1973	50.7	60.4	0.00	57.4	41.82
N261	005	009	1973	50.1	58.9	0.70	57.4	41.82
N261	005	009	1973	49.6	57.4	1.40	57.4	41.82
N261	005	009	1973	47.6	54.9	1.65	57.4	41.82

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	005	009	1973	46.1	52.3	2.74	57.4	41.82
N261	005	009	1973	44.0	49.8	3.57	57.4	41.82
N261	005	009	1973	43.3	47.2	4.63	57.4	41.82
N261	005	009	1973	40.1	42.2	8.69	57.4	41.82
N261	005	009	1973	37.6	39.6	10.27	57.4	41.82
N261	005	009	1973	35.3	37.1	13.08	57.4	41.82
N261	005	009	1973	30.4	32.0	18.04	57.4	41.82
N261	005	009	1973	28.2	29.5	20.64	57.4	41.82
N261	005	009	1973	25.9	26.9	23.38	57.4	41.82
N261	005	009	1973	20.8	21.8	28.93	57.4	41.82
N261	005	009	1973	15.8	16.8	32.64	57.4	41.82
N261	005	009	1973	13.2	14.2	33.89	57.4	41.82
N261	005	009	1973	8.3	9.1	36.03	57.4	41.82
N261	005	009	1973	6.1	6.6	38.62	57.4	41.82
N261	005	014	1973	27.0	32.3	0.70	30.5	33.67
N261	005	014	1973	26.4	30.5	1.40	30.5	33.67
N261	005	014	1973	25.9	27.9	3.57	30.5	33.67
N261	005	014	1973	21.8	22.9	9.20	30.5	33.67
N261	005	014	1973	19.3	20.3	14.20	30.5	33.67
N261	005	014	1973	17.0	17.8	18.90	30.5	33.67
N261	005	014	1973	14.5	15.2	22.89	30.5	33.67
N261	005	014	1973	12.1	12.7	25.91	30.5	33.67
N261	005	014	1973	9.7	10.2	28.96	30.5	33.67
N261	005	014	1973	7.1	7.6	31.21	30.5	33.67
N261	005	018	1973	48.3	57.1	0.70	54.6	43.30
N261	005	018	1973	47.2	54.6	1.40	54.6	43.30
N261	005	018	1973	45.1	52.1	1.65	54.6	43.30
N261	005	018	1973	44.9	49.5	4.05	54.6	43.30
N261	005	018	1973	42.9	47.0	5.12	54.6	43.30
N261	005	018	1973	40.5	44.4	6.58	54.6	43.30
N261	005	018	1973	38.3	41.9	8.29	54.6	43.30
N261	005	018	1973	36.1	39.4	12.59	54.6	43.30
N261	005	018	1973	33.8	36.8	14.45	54.6	43.30
N261	005	018	1973	31.7	34.3	17.04	54.6	43.30
N261	005	018	1973	29.2	31.7	20.73	54.6	43.30
N261	005	018	1973	27.5	29.2	23.53	54.6	43.30
N261	005	018	1973	22.8	24.1	28.29	54.6	43.30
N261	005	018	1973	20.4	21.6	29.96	54.6	43.30
N261	005	018	1973	15.5	16.5	34.59	54.6	43.30
N261	005	018	1973	13.0	14.0	36.33	54.6	43.30
N261	005	018	1973	8.2	8.9	39.50	54.6	43.30
N261	005	018	1973	5.7	6.3	41.30	54.6	43.30
N261	006	004	1973	50.0	58.6	0.00	51.6	39.46
N261	006	004	1973	46.1	55.1	0.70	51.6	39.46
N261	006	004	1973	42.3	51.6	1.40	51.6	39.46
N261	006	004	1973	42.3	49.0	2.47	51.6	39.46
N261	006	004	1973	40.3	43.9	5.94	51.6	39.46
N261	006	004	1973	34.0	36.3	11.67	51.6	39.46
N261	006	004	1973	31.7	33.8	15.45	51.6	39.46
N261	006	004	1973	29.2	31.2	16.89	51.6	39.46

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	006	004	1973	27.1	28.7	17.28	51.6	39.46
N261	006	004	1973	24.7	26.2	22.34	51.6	39.46
N261	006	004	1973	22.4	23.6	25.66	51.6	39.46
N261	006	004	1973	20.0	21.1	27.49	51.6	39.46
N261	006	004	1973	17.5	18.5	30.02	51.6	39.46
N261	006	004	1973	15.0	16.0	32.19	51.6	39.46
N261	006	004	1973	12.7	13.5	33.53	51.6	39.46
N261	006	004	1973	7.8	8.4	35.72	51.6	39.46
N261	006	004	1973	5.3	5.8	37.19	51.6	39.46
N261	006	018	1973	36.6	45.4	0.00	40.4	39.92
N261	006	018	1973	34.6	42.9	0.70	40.4	39.92
N261	006	018	1973	32.6	40.4	1.40	40.4	39.92
N261	006	018	1973	32.3	35.3	4.82	40.4	39.92
N261	006	018	1973	30.3	32.8	7.22	40.4	39.92
N261	006	018	1973	28.0	30.2	9.24	40.4	39.92
N261	006	018	1973	25.9	27.7	14.36	40.4	39.92
N261	006	018	1973	23.6	25.1	18.78	40.4	39.92
N261	006	018	1973	21.3	22.6	23.26	40.4	39.92
N261	006	018	1973	16.2	17.5	27.98	40.4	39.92
N261	006	018	1973	13.9	15.0	29.96	40.4	39.92
N261	006	018	1973	9.1	9.9	34.05	40.4	39.92
N261	006	018	1973	6.9	7.4	34.87	40.4	39.92
N261	006	022	1973	53.4	63.8	0.70	62.2	44.50
N261	006	022	1973	52.7	62.2	1.40	62.2	44.50
N261	006	022	1973	51.1	59.7	2.16	62.2	44.50
N261	006	022	1973	48.0	52.1	4.21	62.2	44.50
N261	006	022	1973	45.9	49.5	6.37	62.2	44.50
N261	006	022	1973	44.1	47.0	8.56	62.2	44.50
N261	006	022	1973	41.8	44.4	10.70	62.2	44.50
N261	006	022	1973	37.4	39.4	14.78	62.2	44.50
N261	006	022	1973	35.0	36.8	17.04	62.2	44.50
N261	006	022	1973	32.7	34.3	19.51	62.2	44.50
N261	006	022	1973	30.2	31.7	21.73	62.2	44.50
N261	006	022	1973	25.4	26.7	27.25	62.2	44.50
N261	006	022	1973	22.8	24.1	30.21	62.2	44.50
N261	006	022	1973	20.3	21.6	32.40	62.2	44.50
N261	006	022	1973	18.0	19.0	34.90	62.2	44.50
N261	006	022	1973	15.5	16.5	36.76	62.2	44.50
N261	006	022	1973	13.0	14.0	38.40	62.2	44.50
N261	006	022	1973	10.4	11.4	39.78	62.2	44.50
N261	006	022	1973	8.1	8.9	40.87	62.2	44.50
N261	006	022	1973	5.7	6.3	42.28	62.2	44.50
N261	006	024	1973	45.6	57.6	0.00	54.6	44.19
N261	006	024	1973	45.3	54.6	1.40	54.6	44.19
N261	006	024	1973	44.4	52.1	1.80	54.6	44.19
N261	006	024	1973	42.7	49.5	2.32	54.6	44.19
N261	006	024	1973	42.8	47.0	3.57	54.6	44.19
N261	006	024	1973	40.9	44.4	4.02	54.6	44.19
N261	006	024	1973	39.2	41.9	7.77	54.6	44.19
N261	006	024	1973	34.6	36.8	14.05	54.6	44.19

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	006	024	1973	32.3	34.3	18.14	54.6	44.19
N261	006	024	1973	30.0	31.7	20.03	54.6	44.19
N261	006	024	1973	25.2	26.7	25.48	54.6	44.19
N261	006	024	1973	23.0	24.1	27.61	54.6	44.19
N261	006	024	1973	20.5	21.6	31.24	54.6	44.19
N261	006	024	1973	18.0	19.0	33.04	54.6	44.19
N261	006	024	1973	15.5	16.5	34.90	54.6	44.19
N261	006	024	1973	10.5	11.4	38.25	54.6	44.19
N261	006	024	1973	8.2	8.9	39.96	54.6	44.19
N261	006	024	1973	5.7	6.3	41.73	54.6	44.19
N261	006	027	1973	58.1	67.6	0.70	63.5	43.79
N261	006	027	1973	55.6	63.5	1.40	63.5	43.79
N261	006	027	1973	53.6	61.0	1.83	63.5	43.79
N261	006	027	1973	52.1	58.4	2.65	63.5	43.79
N261	006	027	1973	52.1	55.9	3.72	63.5	43.79
N261	006	027	1973	49.7	53.3	4.21	63.5	43.79
N261	006	027	1973	48.0	50.8	6.92	63.5	43.79
N261	006	027	1973	43.5	45.7	10.45	63.5	43.79
N261	006	027	1973	38.9	40.6	15.88	63.5	43.79
N261	006	027	1973	36.6	38.1	20.03	63.5	43.79
N261	006	027	1973	34.3	35.6	21.52	63.5	43.79
N261	006	027	1973	31.9	33.0	24.11	63.5	43.79
N261	006	027	1973	29.4	30.5	26.82	63.5	43.79
N261	006	027	1973	26.8	27.9	30.18	63.5	43.79
N261	006	027	1973	24.4	25.4	31.55	63.5	43.79
N261	006	027	1973	21.9	22.9	33.28	63.5	43.79
N261	006	027	1973	19.3	20.3	34.81	63.5	43.79
N261	006	027	1973	14.4	15.2	38.40	63.5	43.79
N261	006	027	1973	11.9	12.7	39.41	63.5	43.79
N261	006	027	1973	9.6	10.2	40.63	63.5	43.79
N261	006	027	1973	4.6	5.1	42.67	63.5	43.79
N386	001	051	1976	17.0	19.0	0.00	14.0	9.55
N386	001	051	1976	15.1	16.5	0.70	14.0	9.55
N386	001	051	1976	13.1	14.0	1.40	14.0	9.55
N386	001	051	1976	10.8	11.5	2.90	14.0	9.55
N386	001	051	1976	8.5	9.1	4.65	14.0	9.55
N386	001	131	1976	16.1	18.1	0.00	12.9	8.00
N386	001	131	1976	14.1	15.5	0.70	12.9	8.00
N386	001	131	1976	12.0	12.9	1.40	12.9	8.00
N386	001	131	1976	7.8	8.2	3.90	12.9	8.00
N386	001	131	1976	5.4	5.6	5.40	12.9	8.00
N386	001	097	1976	16.1	18.3	0.00	12.7	7.67
N386	001	097	1976	13.9	15.5	0.70	12.7	7.67
N386	001	097	1976	11.5	12.7	1.40	12.7	7.67
N386	001	097	1976	6.8	7.5	4.15	12.7	7.67
N386	001	097	1976	4.7	5.3	6.15	12.7	7.67
N386	001	127	1976	13.8	15.9	0.00	12.9	7.75
N386	001	127	1976	12.6	14.4	0.70	12.9	7.75
N386	001	127	1976	11.0	11.9	1.50	12.9	7.75
N386	001	127	1976	10.0	10.9	1.90	12.9	7.75

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	001	127	1976	9.0	9.7	2.50	12.9	7.75
N386	001	127	1976	8.3	8.9	3.30	12.9	7.75
N386	001	127	1976	7.5	8.0	4.00	12.9	7.75
N386	001	127	1976	6.5	6.9	4.50	12.9	7.75
N386	001	991	1976	11.5	13.6	0.00	9.2	6.55
N386	001	991	1976	9.9	11.4	0.70	9.2	6.55
N386	001	991	1976	8.3	9.2	1.40	9.2	6.55
N386	001	991	1976	7.4	8.2	2.00	9.2	6.55
N386	001	991	1976	5.6	6.2	3.16	9.2	6.55
N386	001	991	1976	4.6	5.2	3.85	9.2	6.55
N386	001	992	1976	14.6	16.5	0.00	11.9	7.53
N386	001	992	1976	10.9	11.9	1.40	11.9	7.53
N386	001	992	1976	10.0	10.9	1.84	11.9	7.53
N386	001	992	1976	9.1	9.9	2.45	11.9	7.53
N386	001	992	1976	8.3	8.9	2.90	11.9	7.53
N386	001	992	1976	6.3	6.9	4.00	11.9	7.53
N386	001	992	1976	5.3	5.9	4.75	11.9	7.53
N386	001	993	1976	12.0	13.1	0.00	9.1	5.67
N386	001	993	1976	10.2	11.1	0.70	9.1	5.67
N386	001	993	1976	8.3	9.1	1.40	9.1	5.67
N386	001	993	1976	7.5	8.1	2.04	9.1	5.67
N386	001	993	1976	5.5	6.1	2.67	9.1	5.67
N386	001	993	1976	4.5	5.1	3.30	9.1	5.67
N386	001	994	1976	9.8	10.9	0.70	9.2	6.94
N386	001	994	1976	8.4	9.2	1.40	9.2	6.94
N386	001	994	1976	7.4	8.2	2.07	9.2	6.94
N386	001	994	1976	6.5	7.2	2.84	9.2	6.94
N386	001	994	1976	5.5	6.2	3.48	9.2	6.94
N386	001	994	1976	4.6	5.2	4.53	9.2	6.94
N386	001	116	1976	14.6	16.0	0.00	12.4	7.05
N386	001	116	1976	13.1	14.2	0.70	12.4	7.05
N386	001	116	1976	11.6	12.4	1.40	12.4	7.05
N386	001	116	1976	10.0	10.4	2.40	12.4	7.05
N386	001	116	1976	8.8	9.4	2.60	12.4	7.05
N386	001	116	1976	8.2	8.6	3.30	12.4	7.05
N386	001	116	1976	7.4	7.8	3.80	12.4	7.05
N386	001	116	1976	5.2	5.4	4.90	12.4	7.05
N386	001	995	1976	11.5	12.7	0.00	10.5	6.59
N386	001	995	1976	10.6	11.6	0.70	10.5	6.59
N386	001	995	1976	7.9	8.5	2.40	10.5	6.59
N386	001	995	1976	6.9	7.5	3.02	10.5	6.59
N386	001	995	1976	5.9	6.5	3.69	10.5	6.59
N386	001	995	1976	5.0	5.5	4.90	10.5	6.59
N386	001	996	1976	10.9	12.8	0.00	9.2	4.98
N386	001	996	1976	9.5	11.0	0.70	9.2	4.98
N386	001	996	1976	8.1	9.2	1.40	9.2	4.98
N386	001	996	1976	6.4	7.2	2.28	9.2	4.98
N386	001	996	1976	5.5	6.2	2.82	9.2	4.98
N386	001	996	1976	4.7	5.4	3.80	9.2	4.98
N386	001	997	1976	12.9	14.3	0.00	11.3	6.92

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	001	997	1976	11.6	12.8	0.70	11.3	6.92
N386	001	997	1976	9.4	10.3	1.72	11.3	6.92
N386	001	997	1976	8.5	9.3	2.17	11.3	6.92
N386	001	997	1976	7.6	8.3	2.36	11.3	6.92
N386	001	997	1976	6.7	7.3	2.99	11.3	6.92
N386	001	997	1976	5.7	6.3	3.45	11.3	6.92
N386	002	085	1976	16.5	18.1	0.00	12.9	7.95
N386	002	085	1976	14.3	15.5	0.70	12.9	7.95
N386	002	085	1976	12.0	12.9	1.40	12.9	7.95
N386	002	085	1976	10.0	10.4	2.15	12.9	7.95
N386	002	085	1976	5.2	5.4	4.90	12.9	7.95
N386	002	053	1976	14.9	16.5	0.00	11.1	7.08
N386	002	053	1976	12.6	13.8	0.70	11.1	7.08
N386	002	053	1976	10.4	11.1	1.40	11.1	7.08
N386	002	053	1976	9.6	10.1	2.20	11.1	7.08
N386	002	053	1976	6.5	7.1	3.85	11.1	7.08
N386	002	053	1976	5.7	6.1	4.25	11.1	7.08
N386	002	053	1976	4.7	5.1	4.85	11.1	7.08
N386	002	121	1976	16.0	17.4	0.00	13.4	8.04
N386	002	121	1976	14.1	15.4	0.70	13.4	8.04
N386	002	121	1976	10.0	10.9	2.70	13.4	8.04
N386	002	121	1976	7.5	8.4	3.95	13.4	8.04
N386	002	121	1976	5.3	5.9	5.90	13.4	8.04
N386	002	024	1976	8.7	10.0	0.00	6.6	5.51
N386	002	024	1976	5.9	6.6	1.40	6.6	5.51
N386	002	024	1976	5.4	6.1	1.65	6.6	5.51
N386	002	024	1976	5.0	5.6	2.23	6.6	5.51
N386	002	024	1976	4.6	5.1	2.53	6.6	5.51
N386	002	112	1976	15.7	17.0	0.00	13.0	8.20
N386	002	112	1976	14.1	15.0	0.70	13.0	8.20
N386	002	112	1976	9.9	10.5	2.86	13.0	8.20
N386	002	112	1976	7.5	8.0	3.32	13.0	8.20
N386	002	112	1976	5.2	5.5	5.03	13.0	8.20
N386	002	098	1976	15.0	16.6	0.00	13.0	9.40
N386	002	098	1976	13.7	14.8	0.70	13.0	9.40
N386	002	098	1976	12.4	13.0	1.40	13.0	9.40
N386	002	098	1976	11.3	12.0	2.17	13.0	9.40
N386	002	098	1976	10.4	11.0	2.52	13.0	9.40
N386	002	098	1976	9.4	10.0	3.18	13.0	9.40
N386	002	098	1976	7.6	8.0	5.27	13.0	9.40
N386	002	098	1976	6.5	7.0	6.37	13.0	9.40
N386	002	098	1976	4.6	5.0	7.58	13.0	9.40
N386	002	070	1976	8.7	9.2	0.00	7.2	5.54
N386	002	070	1976	6.8	7.2	1.40	7.2	5.54
N386	002	070	1976	5.8	6.2	2.06	7.2	5.54
N386	002	070	1976	4.9	5.2	2.77	7.2	5.54
N386	002	029	1976	11.1	12.1	0.70	11.5	6.76
N386	002	029	1976	10.6	11.5	1.40	11.5	6.76
N386	002	029	1976	9.6	10.5	1.55	11.5	6.76
N386	002	029	1976	8.7	9.5	1.67	11.5	6.76

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	002	029	1976	6.8	7.5	3.00	11.5	6.76
N386	002	029	1976	5.9	6.5	3.27	11.5	6.76
N386	002	029	1976	4.9	5.5	3.85	11.5	6.76
N386	002	119	1976	13.7	16.0	0.00	12.2	6.59
N386	002	119	1976	12.3	14.1	0.70	12.2	6.59
N386	002	119	1976	10.3	11.2	1.65	12.2	6.59
N386	002	119	1976	9.4	10.2	2.06	12.2	6.59
N386	002	119	1976	8.3	9.2	2.35	12.2	6.59
N386	002	119	1976	8.0	8.7	2.81	12.2	6.59
N386	002	119	1976	6.5	7.2	3.40	12.2	6.59
N386	002	119	1976	4.5	5.2	4.74	12.2	6.59
N386	002	067	1976	10.1	11.2	0.00	8.6	6.30
N386	002	067	1976	8.9	9.9	0.70	8.6	6.30
N386	002	067	1976	6.8	7.6	1.78	8.6	6.30
N386	002	067	1976	6.1	6.6	2.75	8.6	6.30
N386	002	067	1976	5.1	5.6	3.32	8.6	6.30
N386	002	042	1976	13.5	14.6	0.00	11.0	7.06
N386	002	042	1976	11.9	12.8	0.70	11.0	7.06
N386	002	042	1976	10.3	11.0	1.40	11.0	7.06
N386	002	042	1976	9.4	10.0	1.93	11.0	7.06
N386	002	042	1976	6.4	7.0	3.97	11.0	7.06
N386	002	042	1976	5.6	6.0	4.80	11.0	7.06
N386	002	042	1976	4.6	5.0	5.30	11.0	7.06
N386	002	087	1976	10.9	11.6	0.00	9.0	6.47
N386	002	087	1976	9.6	10.3	0.70	9.0	6.47
N386	002	087	1976	8.4	9.0	1.40	9.0	6.47
N386	002	087	1976	7.6	8.0	2.05	9.0	6.47
N386	002	087	1976	6.6	7.0	2.89	9.0	6.47
N386	002	087	1976	5.6	6.0	3.59	9.0	6.47
N386	003	998	1976	7.1	8.1	0.00	6.5	4.80
N386	003	998	1976	5.8	6.5	1.40	6.5	4.80
N386	003	998	1976	5.4	6.0	1.75	6.5	4.80
N386	003	998	1976	5.0	5.5	2.00	6.5	4.80
N386	003	998	1976	4.5	5.0	2.35	6.5	4.80
N386	003	999	1976	8.5	9.2	0.00	6.0	4.34
N386	003	999	1976	5.3	6.0	1.40	6.0	4.34
N386	003	999	1976	4.9	5.5	1.62	6.0	4.34
N386	003	999	1976	4.5	5.0	1.81	6.0	4.34
N386	003	037	1976	12.6	13.6	0.70	11.8	7.23
N386	003	037	1976	11.0	11.8	1.40	11.8	7.23
N386	003	037	1976	10.0	10.8	1.70	11.8	7.23
N386	003	037	1976	9.2	9.8	2.35	11.8	7.23
N386	003	037	1976	8.2	8.8	2.65	11.8	7.23
N386	003	037	1976	7.2	7.8	3.35	11.8	7.23
N386	003	037	1976	5.4	5.8	4.35	11.8	7.23
N386	003	086	1976	9.1	10.1	1.40	10.1	5.73
N386	003	086	1976	8.1	9.1	1.52	10.1	5.73
N386	003	086	1976	7.1	8.1	1.74	10.1	5.73
N386	003	086	1976	6.1	7.1	2.15	10.1	5.73
N386	003	086	1976	5.3	6.1	2.85	10.1	5.73

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	003	086	1976	4.5	5.1	3.15	10.1	5.73
N386	003	016	1976	13.8	16.9	0.00	12.5	7.09
N386	003	016	1976	12.4	14.7	0.70	12.5	7.09
N386	003	016	1976	11.1	12.5	1.40	12.5	7.09
N386	003	016	1976	10.5	11.5	1.65	12.5	7.09
N386	003	016	1976	9.5	10.5	2.25	12.5	7.09
N386	003	016	1976	8.7	9.5	2.60	12.5	7.09
N386	003	016	1976	7.7	8.5	3.60	12.5	7.09
N386	003	016	1976	4.9	5.5	5.10	12.5	7.09
N386	003	013	1976	13.9	15.7	0.00	11.3	6.00
N386	003	013	1976	12.3	13.5	0.70	11.3	6.00
N386	003	013	1976	10.6	11.3	1.40	11.3	6.00
N386	003	013	1976	8.1	8.8	2.25	11.3	6.00
N386	003	007	1976	8.6	8.9	0.00	6.5	4.60
N386	003	007	1976	6.1	6.5	1.40	6.5	4.60
N386	003	007	1976	5.0	5.5	1.80	6.5	4.60
N386	003	997	1976	6.6	7.6	0.70	6.8	4.79
N386	003	997	1976	6.2	6.8	1.40	6.8	4.79
N386	003	997	1976	5.2	5.8	1.65	6.8	4.79
N386	003	073	1976	15.0	16.5	0.00	12.3	8.40
N386	003	073	1976	13.2	14.4	0.70	12.3	8.40
N386	003	073	1976	11.5	12.3	1.40	12.3	8.40
N386	003	073	1976	9.6	10.3	2.55	12.3	8.40
N386	003	073	1976	8.7	9.3	3.05	12.3	8.40
N386	003	073	1976	7.7	8.3	3.90	12.3	8.40
N386	003	073	1976	6.7	7.3	4.60	12.3	8.40
N386	003	073	1976	4.7	5.3	6.00	12.3	8.40
N386	003	062	1976	12.3	13.3	0.00	10.7	6.33
N386	003	062	1976	11.2	12.0	0.70	10.7	6.33
N386	003	062	1976	10.0	10.7	1.40	10.7	6.33
N386	003	062	1976	9.0	9.7	2.05	10.7	6.33
N386	003	062	1976	8.1	8.7	2.20	10.7	6.33
N386	003	062	1976	6.1	6.7	3.35	10.7	6.33
N386	003	050	1976	10.5	11.3	0.70	10.8	6.77
N386	003	050	1976	10.1	10.8	1.40	10.8	6.77
N386	003	050	1976	9.3	9.8	1.50	10.8	6.77
N386	003	050	1976	8.4	8.8	2.20	10.8	6.77
N386	003	050	1976	6.2	6.8	3.45	10.8	6.77
N386	003	050	1976	5.3	5.8	3.70	10.8	6.77
N386	003	081	1976	16.2	17.5	0.00	12.7	7.74
N386	003	081	1976	14.1	15.1	0.70	12.7	7.74
N386	003	081	1976	12.0	12.7	1.40	12.7	7.74
N386	003	081	1976	9.6	10.2	2.55	12.7	7.74
N386	003	081	1976	4.6	5.2	5.50	12.7	7.74
N386	001	005	1980	20.1	22.4	0.00	17.6	11.20
N386	001	005	1980	18.1	20.0	0.70	17.6	11.20
N386	001	005	1980	13.8	14.8	2.45	17.6	11.20
N386	001	005	1980	11.8	12.6	3.79	17.6	11.20
N386	001	005	1980	9.3	10.1	5.95	17.6	11.20
N386	001	005	1980	6.9	7.5	7.80	17.6	11.20

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	001	014	1980	23.2	26.8	0.70	22.8	14.12
N386	001	014	1980	20.3	22.8	1.40	22.8	14.12
N386	001	014	1980	18.8	20.4	2.40	22.8	14.12
N386	001	014	1980	16.3	17.9	4.30	22.8	14.12
N386	001	014	1980	11.9	12.9	7.60	22.8	14.12
N386	001	014	1980	9.7	10.5	9.21	22.8	14.12
N386	001	014	1980	7.0	7.8	11.00	22.8	14.12
N386	001	026	1980	23.6	26.2	0.70	23.4	15.90
N386	001	026	1980	21.5	23.4	1.40	23.4	15.90
N386	001	026	1980	17.4	18.6	4.79	23.4	15.90
N386	001	026	1980	14.5	15.5	6.84	23.4	15.90
N386	001	026	1980	12.4	13.4	8.30	23.4	15.90
N386	001	026	1980	10.1	10.9	10.00	23.4	15.90
N386	001	026	1980	7.8	8.6	11.53	23.4	15.90
N386	001	027	1980	17.7	20.6	0.00	17.6	11.10
N386	001	027	1980	16.9	19.1	0.70	17.6	11.10
N386	001	027	1980	14.0	15.2	2.52	17.6	11.10
N386	001	027	1980	11.0	12.0	4.40	17.6	11.10
N386	001	027	1980	9.2	10.0	5.99	17.6	11.10
N386	001	027	1980	6.7	7.5	7.54	17.6	11.10
N386	001	030	1980	24.5	28.7	0.00	22.9	14.40
N386	001	030	1980	22.6	25.8	0.70	22.9	14.40
N386	001	030	1980	20.6	22.9	1.40	22.9	14.40
N386	001	030	1980	16.5	17.7	3.80	22.9	14.40
N386	001	030	1980	14.2	15.2	5.42	22.9	14.40
N386	001	030	1980	11.3	12.3	7.47	22.9	14.40
N386	001	030	1980	9.1	9.9	9.31	22.9	14.40
N386	002	012	1980	25.3	30.3	0.00	23.1	15.00
N386	002	012	1980	21.0	23.1	1.40	23.1	15.00
N386	002	012	1980	19.0	20.4	2.96	23.1	15.00
N386	002	012	1980	16.8	18.2	4.80	23.1	15.00
N386	002	012	1980	14.3	15.5	6.22	23.1	15.00
N386	002	012	1980	11.8	12.8	7.79	23.1	15.00
N386	002	012	1980	9.7	10.5	9.34	23.1	15.00
N386	002	015	1980	24.2	27.5	0.70	23.8	11.10
N386	002	015	1980	21.4	23.8	1.40	23.8	11.10
N386	002	015	1980	17.6	18.8	3.28	23.8	11.10
N386	002	015	1980	14.6	15.6	4.39	23.8	11.10
N386	002	015	1980	12.8	13.8	5.32	23.8	11.10
N386	002	015	1980	10.4	11.2	5.92	23.8	11.10
N386	002	015	1980	7.9	8.7	7.04	23.8	11.10
N386	002	018	1980	19.3	23.6	0.00	18.8	11.70
N386	002	018	1980	18.1	21.2	0.70	18.8	11.70
N386	002	018	1980	16.8	18.8	1.40	18.8	11.70
N386	002	018	1980	14.9	16.3	3.08	18.8	11.70
N386	002	018	1980	10.1	11.1	6.22	18.8	11.70
N386	002	018	1980	8.0	8.8	7.38	18.8	11.70
N386	002	020	1980	19.0	22.5	0.00	18.5	10.90
N386	002	020	1980	17.6	20.5	0.70	18.5	10.90
N386	002	020	1980	14.7	16.0	2.19	18.5	10.90

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	002	020	1980	12.6	13.8	3.48	18.5	10.90
N386	002	020	1980	10.3	11.3	5.14	18.5	10.90
N386	002	020	1980	7.4	8.2	6.92	18.5	10.90
N386	002	028	1980	24.0	27.6	0.70	23.2	12.20
N386	002	028	1980	20.9	23.2	1.40	23.2	12.20
N386	002	028	1980	19.4	21.0	2.20	23.2	12.20
N386	002	028	1980	16.8	18.2	3.48	23.2	12.20
N386	002	028	1980	14.6	15.6	4.90	23.2	12.20
N386	002	028	1980	12.6	13.6	6.23	23.2	12.20
N386	002	028	1980	7.5	8.3	9.00	23.2	12.20
N386	003	003	1980	24.0	28.6	0.00	23.6	13.35
N386	003	003	1980	22.6	26.1	0.70	23.6	13.35
N386	003	003	1980	21.2	23.6	1.40	23.6	13.35
N386	003	003	1980	19.5	20.9	2.98	23.6	13.35
N386	003	003	1980	15.9	16.9	6.32	23.6	13.35
N386	003	003	1980	12.6	13.6	7.25	23.6	13.35
N386	003	003	1980	10.2	11.0	8.52	23.6	13.35
N386	003	020	1980	24.0	29.2	0.00	22.8	13.00
N386	003	020	1980	20.9	22.8	1.40	22.8	13.00
N386	003	020	1980	18.3	20.0	2.45	22.8	13.00
N386	003	020	1980	13.7	15.1	5.04	22.8	13.00
N386	003	020	1980	11.7	12.9	6.13	22.8	13.00
N386	003	020	1980	9.4	10.4	7.78	22.8	13.00
N386	003	020	1980	7.2	7.8	9.20	22.8	13.00
N386	003	023	1980	17.4	21.0	0.00	17.8	12.10
N386	003	023	1980	16.4	19.4	0.70	17.8	12.10
N386	003	023	1980	15.5	17.8	1.40	17.8	12.10
N386	003	023	1980	14.2	15.7	3.40	17.8	12.10
N386	003	023	1980	9.5	10.3	6.84	17.8	12.10
N386	003	023	1980	7.2	7.6	9.57	17.8	12.10
N386	003	026	1980	24.0	28.6	0.00	23.6	13.80
N386	003	026	1980	22.6	26.1	0.70	23.6	13.80
N386	003	026	1980	21.2	23.6	1.40	23.6	13.80
N386	003	026	1980	19.5	20.9	2.17	23.6	13.80
N386	003	026	1980	15.9	16.9	4.80	23.6	13.80
N386	003	026	1980	12.6	13.6	6.28	23.6	13.80
N386	003	026	1980	7.7	8.5	9.42	23.6	13.80
N386	003	032	1980	17.6	20.8	0.00	17.0	10.70
N386	003	032	1980	15.3	17.0	1.40	17.0	10.70
N386	003	032	1980	13.0	14.5	3.10	17.0	10.70
N386	003	032	1980	11.2	12.2	4.50	17.0	10.70
N386	003	032	1980	8.7	9.5	5.85	17.0	10.70
N386	003	032	1980	6.3	6.9	7.85	17.0	10.70
N386	004	004	1980	27.5	30.4	0.00	25.0	11.10
N386	004	004	1980	23.0	25.0	1.40	25.0	11.10
N386	004	004	1980	20.7	22.7	2.10	25.0	11.10
N386	004	004	1980	20.0	22.0	2.90	25.0	11.10
N386	004	004	1980	13.5	14.7	4.75	25.0	11.10
N386	004	004	1980	11.2	12.4	5.87	25.0	11.10
N386	004	004	1980	9.4	10.4	6.35	25.0	11.10

Appendix 7. Sectionol measurement doto for Golden Downs.
(cont.) (80% sub-somple)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	004	004	1980	6.3	7.1	7.98	25.0	11.10
N386	004	007	1980	18.4	20.6	0.00	17.4	11.90
N386	004	007	1980	17.2	19.0	0.70	17.4	11.90
N386	004	007	1980	16.0	17.4	1.40	17.4	11.90
N386	004	007	1980	13.1	14.3	3.80	17.4	11.90
N386	004	007	1980	9.3	10.1	6.30	17.4	11.90
N386	004	007	1980	6.5	7.3	8.18	17.4	11.90
N386	004	008	1980	25.3	28.9	0.00	24.3	12.80
N386	004	008	1980	23.4	26.6	0.70	24.3	12.80
N386	004	008	1980	21.5	24.3	1.40	24.3	12.80
N386	004	008	1980	20.0	22.0	2.28	24.3	12.80
N386	004	008	1980	11.3	12.7	6.00	24.3	12.80
N386	004	008	1980	8.9	9.9	7.62	24.3	12.80
N386	004	008	1980	6.8	7.6	8.64	24.3	12.80
N386	004	029	1980	18.9	22.0	0.00	17.8	10.40
N386	004	029	1980	17.5	19.9	0.70	17.8	10.40
N386	004	029	1980	16.2	17.8	1.40	17.8	10.40
N386	004	029	1980	14.6	16.2	2.40	17.8	10.40
N386	004	029	1980	12.4	13.4	2.88	17.8	10.40
N386	005	004	1980	24.1	28.3	0.00	23.9	10.30
N386	005	004	1980	22.6	26.1	0.70	23.9	10.30
N386	005	004	1980	18.8	20.8	2.65	23.9	10.30
N386	005	004	1980	17.9	19.5	3.25	23.9	10.30
N386	005	004	1980	15.6	17.0	4.51	23.9	10.30
N386	005	004	1980	13.1	14.3	5.48	23.9	10.30
N386	005	004	1980	7.7	8.7	7.82	23.9	10.30
N386	005	013	1980	24.0	28.2	0.00	24.0	14.70
N386	005	013	1980	22.5	26.1	0.70	24.0	14.70
N386	005	013	1980	19.7	21.7	2.48	24.0	14.70
N386	005	013	1980	17.2	18.8	3.48	24.0	14.70
N386	005	013	1980	14.9	16.5	4.71	24.0	14.70
N386	005	013	1980	11.0	12.0	7.45	24.0	14.70
N386	005	013	1980	8.3	9.1	8.69	24.0	14.70
N386	005	013	1980	5.7	6.3	11.04	24.0	14.70
N386	005	015	1980	25.9	30.9	0.00	23.7	11.30
N386	005	015	1980	19.4	21.2	2.25	23.7	11.30
N386	005	015	1980	16.9	18.5	3.21	23.7	11.30
N386	005	015	1980	14.6	15.8	4.53	23.7	11.30
N386	005	015	1980	12.6	13.6	5.53	23.7	11.30
N386	005	015	1980	10.3	11.1	6.78	23.7	11.30
N386	005	015	1980	7.6	8.4	8.25	23.7	11.30
N386	005	021	1980	16.6	18.9	0.70	17.1	9.90
N386	005	021	1980	15.6	17.1	1.40	17.1	9.90
N386	005	021	1980	13.5	14.7	2.95	17.1	9.90
N386	005	021	1980	11.1	12.1	4.30	17.1	9.90
N386	005	021	1980	8.5	9.3	5.32	17.1	9.90
N386	005	021	1980	6.3	6.9	6.63	17.1	9.90
N386	005	026	1980	19.4	21.4	0.00	18.2	11.10
N386	005	026	1980	18.0	19.8	0.70	18.2	11.10
N386	005	026	1980	16.6	18.2	1.40	18.2	11.10

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	005	026	1980	12.0	13.0	4.25	18.2	11.10
N386	005	026	1980	9.6	10.6	5.32	18.2	11.10
N386	005	026	1980	7.3	8.3	6.82	18.2	11.10
N386	006	015	1980	16.1	18.5	0.70	17.2	11.35
N386	006	015	1980	15.2	17.2	1.40	17.2	11.35
N386	006	015	1980	13.0	14.4	2.57	17.2	11.35
N386	006	015	1980	11.0	12.2	3.74	17.2	11.35
N386	006	015	1980	8.8	9.8	5.60	17.2	11.35
N386	006	015	1980	6.4	7.2	7.84	17.2	11.35
N386	006	019	1980	20.5	23.4	0.70	22.7	12.95
N386	006	019	1980	20.3	22.7	1.40	22.7	12.95
N386	006	019	1980	19.2	21.0	2.14	22.7	12.95
N386	006	019	1980	17.2	18.8	3.31	22.7	12.95
N386	006	019	1980	14.4	15.6	4.07	22.7	12.95
N386	006	019	1980	12.6	13.6	5.70	22.7	12.95
N386	006	019	1980	8.1	8.9	8.84	22.7	12.95
N386	006	029	1980	18.8	21.7	0.00	17.3	12.20
N386	006	029	1980	15.9	17.3	1.40	17.3	12.20
N386	006	029	1980	13.7	14.9	3.07	17.3	12.20
N386	006	029	1980	11.5	12.3	5.01	17.3	12.20
N386	006	029	1980	9.0	9.8	7.10	17.3	12.20
N386	006	029	1980	6.5	7.3	8.68	17.3	12.20
N386	006	035	1980	20.5	25.7	0.00	23.3	12.80
N386	006	035	1980	20.5	23.3	1.40	23.3	12.80
N386	006	035	1980	16.7	18.3	2.42	23.3	12.80
N386	006	035	1980	14.6	15.8	4.28	23.3	12.80
N386	006	035	1980	12.2	13.2	5.44	23.3	12.80
N386	006	035	1980	9.9	10.9	6.60	23.3	12.80
N386	006	035	1980	7.4	8.2	8.20	23.3	12.80
N386	007	006	1980	20.9	24.5	0.70	22.3	13.50
N386	007	006	1980	19.9	22.3	1.40	22.3	13.50
N386	007	006	1980	17.4	19.0	2.55	22.3	13.50
N386	007	006	1980	14.1	15.3	5.65	22.3	13.50
N386	007	006	1980	11.5	12.3	7.44	22.3	13.50
N386	007	006	1980	9.3	10.1	8.88	22.3	13.50
N386	007	006	1980	6.6	7.4	10.10	22.3	13.50
N386	007	010	1980	18.9	20.5	0.00	18.5	11.05
N386	007	010	1980	17.9	19.5	0.70	18.5	11.05
N386	007	010	1980	16.9	18.5	1.40	18.5	11.05
N386	007	010	1980	15.0	16.0	2.78	18.5	11.05
N386	007	010	1980	12.5	13.5	4.22	18.5	11.05
N386	007	010	1980	7.5	8.3	6.97	18.5	11.05
N386	007	012	1980	17.0	20.6	0.00	18.2	11.70
N386	007	012	1980	16.6	19.4	0.70	18.2	11.70
N386	007	012	1980	16.2	18.2	1.40	18.2	11.70
N386	007	012	1980	15.3	16.9	1.89	18.2	11.70
N386	007	012	1980	12.6	13.8	3.72	18.2	11.70
N386	007	012	1980	8.8	9.6	6.43	18.2	11.70
N386	007	021	1980	21.2	25.6	0.00	22.4	13.90
N386	007	021	1980	20.6	24.0	0.70	22.4	13.90

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	007	021	1980	20.0	22.4	1.40	22.4	13.90
N386	007	021	1980	15.6	17.4	3.48	22.4	13.90
N386	007	021	1980	13.7	14.7	5.52	22.4	13.90
N386	007	021	1980	9.2	10.0	8.38	22.4	13.90
N386	007	021	1980	6.2	7.0	10.62	22.4	13.90
N386	007	028	1980	21.0	24.4	0.70	23.3	12.50
N386	007	028	1980	20.7	23.3	1.40	23.3	12.50
N386	007	028	1980	18.6	20.2	2.20	23.3	12.50
N386	007	028	1980	16.1	17.7	3.63	23.3	12.50
N386	007	028	1980	13.4	14.8	5.32	23.3	12.50
N386	007	028	1980	8.1	8.9	8.07	23.3	12.50
N386	007	028	1980	6.0	6.8	9.03	23.3	12.50
N386	008	004	1980	22.5	24.9	0.70	22.9	13.60
N386	008	004	1980	20.9	22.9	1.40	22.9	13.60
N386	008	004	1980	18.4	19.8	2.74	22.9	13.60
N386	008	004	1980	15.5	16.7	5.11	22.9	13.60
N386	008	004	1980	13.3	14.3	5.85	22.9	13.60
N386	008	004	1980	11.7	12.7	7.12	22.9	13.60
N386	008	004	1980	9.4	10.4	7.58	22.9	13.60
N386	008	004	1980	7.4	8.2	8.93	22.9	13.60
N386	008	015	1980	25.2	29.0	0.00	23.4	13.45
N386	008	015	1980	23.2	26.2	0.70	23.4	13.45
N386	008	015	1980	18.7	20.1	3.12	23.4	13.45
N386	008	015	1980	16.8	18.2	4.63	23.4	13.45
N386	008	015	1980	12.8	14.0	6.71	23.4	13.45
N386	008	015	1980	9.9	10.9	7.88	23.4	13.45
N386	008	015	1980	8.0	8.8	9.00	23.4	13.45
N386	008	025	1980	20.3	23.1	0.00	19.9	11.10
N386	008	025	1980	19.3	21.5	0.70	19.9	11.10
N386	008	025	1980	18.3	19.9	1.40	19.9	11.10
N386	008	025	1980	13.6	14.8	3.62	19.9	11.10
N386	008	025	1980	9.5	10.3	6.08	19.9	11.10
N386	008	025	1980	5.9	6.7	7.60	19.9	11.10
N386	008	026	1980	18.4	21.2	0.00	19.0	10.00
N386	008	026	1980	17.7	20.1	0.70	19.0	10.00
N386	008	026	1980	17.0	19.0	1.40	19.0	10.00
N386	008	026	1980	12.8	14.0	3.66	19.0	10.00
N386	008	026	1980	8.2	9.2	5.51	19.0	10.00
N386	008	026	1980	5.6	6.4	6.84	19.0	10.00
N386	008	029	1980	24.6	28.6	0.00	23.8	12.20
N386	008	029	1980	20.6	23.8	1.40	23.8	12.20
N386	008	029	1980	16.7	18.3	3.24	23.8	12.20
N386	008	029	1980	15.1	16.5	4.25	23.8	12.20
N386	008	029	1980	12.2	13.4	5.42	23.8	12.20
N386	008	029	1980	10.4	11.4	6.64	23.8	12.20
N386	008	029	1980	7.5	8.5	7.96	23.8	12.20
N386	008	029	1980	5.2	6.0	9.28	23.8	12.20
N386	009	004	1980	16.5	18.9	0.00	16.3	10.35
N386	009	004	1980	15.6	17.6	0.70	16.3	10.35
N386	009	004	1980	13.6	14.6	2.40	16.3	10.35

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	009	004	1980	10.8	11.8	3.48	16.3	10.35
N386	009	004	1980	8.4	9.2	5.36	16.3	10.35
N386	009	004	1980	6.3	7.1	6.78	16.3	10.35
N386	009	005	1980	22.9	25.7	0.00	22.5	13.50
N386	009	005	1980	21.7	24.1	0.70	22.5	13.50
N386	009	005	1980	20.5	22.5	1.40	22.5	13.50
N386	009	005	1980	16.5	17.5	4.89	22.5	13.50
N386	009	005	1980	14.0	15.0	5.64	22.5	13.50
N386	009	005	1980	9.0	9.8	8.60	22.5	13.50
N386	009	005	1980	6.7	7.5	10.54	22.5	13.50
N386	009	016	1980	23.3	26.9	0.00	21.5	11.30
N386	009	016	1980	21.2	24.2	0.70	21.5	11.30
N386	009	016	1980	19.1	21.5	1.40	21.5	11.30
N386	009	016	1980	17.6	19.0	2.45	21.5	11.30
N386	009	016	1980	12.8	14.0	5.30	21.5	11.30
N386	009	016	1980	10.8	11.8	5.90	21.5	11.30
N386	009	016	1980	8.2	9.0	6.85	21.5	11.30
N386	009	026	1980	24.4	27.2	0.00	22.8	12.60
N386	009	026	1980	20.8	22.8	1.40	22.8	12.60
N386	009	026	1980	19.3	20.7	2.50	22.8	12.60
N386	009	026	1980	14.6	15.8	5.15	22.8	12.60
N386	009	026	1980	11.3	12.3	6.60	22.8	12.60
N386	009	026	1980	9.4	10.2	7.52	22.8	12.60
N386	009	026	1980	6.7	7.5	9.38	22.8	12.60
N386	009	029	1980	16.2	18.6	0.00	16.4	11.00
N386	009	029	1980	15.5	17.5	0.70	16.4	11.00
N386	009	029	1980	12.5	13.5	2.94	16.4	11.00
N386	009	029	1980	10.7	11.5	4.25	16.4	11.00
N386	009	029	1980	7.5	8.3	6.65	16.4	11.00
N386	010	005	1980	15.8	18.8	0.00	15.6	12.80
N386	010	005	1980	14.2	15.6	1.40	15.6	12.80
N386	010	005	1980	12.1	13.1	3.90	15.6	12.80
N386	010	005	1980	9.5	10.3	6.38	15.6	12.80
N386	010	005	1980	7.3	8.1	8.33	15.6	12.80
N386	010	011	1980	16.8	19.8	0.00	15.8	10.30
N386	010	011	1980	15.4	17.8	0.70	15.8	10.30
N386	010	011	1980	14.0	15.8	1.40	15.8	10.30
N386	010	011	1980	12.6	13.8	2.30	15.8	10.30
N386	010	011	1980	9.8	10.8	3.90	15.8	10.30
N386	010	012	1980	19.4	23.0	0.70	20.9	11.80
N386	010	012	1980	18.5	20.9	1.40	20.9	11.80
N386	010	012	1980	16.9	18.9	2.50	20.9	11.80
N386	010	012	1980	12.2	13.4	4.98	20.9	11.80
N386	010	012	1980	9.8	10.8	6.41	20.9	11.80
N386	010	012	1980	7.7	8.5	7.69	20.9	11.80
N386	010	023	1980	20.2	24.6	0.00	20.6	14.60
N386	010	023	1980	19.2	22.6	0.70	20.6	14.60
N386	010	023	1980	18.2	20.6	1.40	20.6	14.60
N386	010	023	1980	16.6	18.2	2.22	20.6	14.60
N386	010	023	1980	13.8	15.4	4.85	20.6	14.60

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	010	023	1980	11.9	13.1	7.04	20.6	14.60
N386	010	025	1980	22.5	26.7	0.00	20.5	14.00
N386	010	025	1980	17.9	20.5	1.40	20.5	14.00
N386	010	025	1980	14.1	15.3	5.27	20.5	14.00
N386	010	025	1980	12.2	13.2	6.18	20.5	14.00
N386	010	025	1980	9.4	10.4	8.09	20.5	14.00
N386	010	025	1980	7.2	8.0	10.07	20.5	14.00
N386	011	002	1980	24.0	28.2	0.00	23.8	16.20
N386	011	002	1980	22.6	26.0	0.70	23.8	16.20
N386	011	002	1980	21.2	23.8	1.40	23.8	16.20
N386	011	002	1980	19.2	20.8	2.57	23.8	16.20
N386	011	002	1980	17.4	18.8	3.92	23.8	16.20
N386	011	002	1980	15.0	16.2	5.54	23.8	16.20
N386	011	002	1980	10.4	11.4	9.20	23.8	16.20
N386	011	003	1980	25.4	29.0	0.00	23.6	14.30
N386	011	003	1980	21.2	23.6	1.40	23.6	14.30
N386	011	003	1980	19.7	21.7	2.42	23.6	14.30
N386	011	003	1980	17.0	18.6	4.45	23.6	14.30
N386	011	003	1980	14.7	16.1	6.35	23.6	14.30
N386	011	003	1980	12.4	13.6	7.60	23.6	14.30
N386	011	003	1980	7.5	8.3	10.82	23.6	14.30
N386	011	004	1980	15.5	18.5	0.00	15.9	10.50
N386	011	004	1980	15.0	17.2	0.70	15.9	10.50
N386	011	004	1980	14.5	15.9	1.40	15.9	10.50
N386	011	004	1980	12.4	13.4	3.15	15.9	10.50
N386	011	004	1980	10.1	10.9	5.28	15.9	10.50
N386	011	007	1980	19.0	22.2	0.00	16.0	12.90
N386	011	007	1980	16.7	19.1	0.70	16.0	12.90
N386	011	007	1980	14.4	16.0	1.40	16.0	12.90
N386	011	007	1980	10.0	11.0	5.86	16.0	12.90
N386	011	007	1980	7.8	8.6	7.72	16.0	12.90
N386	011	020	1980	19.4	23.6	0.70	21.8	12.70
N386	011	020	1980	18.8	21.8	1.40	21.8	12.70
N386	011	020	1980	17.5	19.3	2.13	21.8	12.70
N386	011	020	1980	15.4	16.8	3.76	21.8	12.70
N386	011	020	1980	10.8	11.8	6.78	21.8	12.70
N386	011	020	1980	8.4	9.2	8.35	21.8	12.70
N386	011	020	1980	6.2	7.0	9.54	21.8	12.70
N386	012	007	1980	19.7	23.3	0.00	19.7	11.60
N386	012	007	1980	17.3	19.7	1.40	19.7	11.60
N386	012	007	1980	14.6	16.0	2.85	19.7	11.60
N386	012	007	1980	12.4	13.4	4.13	19.7	11.60
N386	012	007	1980	9.5	10.5	6.64	19.7	11.60
N386	012	007	1980	7.8	8.6	7.55	19.7	11.60
N386	012	012	1980	21.7	25.3	0.00	20.5	12.10
N386	012	012	1980	17.7	20.5	1.40	20.5	12.10
N386	012	012	1980	14.1	15.5	4.14	20.5	12.10
N386	012	012	1980	11.7	12.9	6.09	20.5	12.10
N386	012	012	1980	9.5	10.5	7.42	20.5	12.10
N386	012	012	1980	7.6	8.4	8.76	20.5	12.10

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	012	012	1980	13.8	17.0	0.00	14.4	9.46
N386	012	012	1980	12.4	14.4	1.40	14.4	9.46
N386	012	012	1980	10.8	12.2	2.46	14.4	9.46
N386	012	012	1980	9.6	10.8	3.60	14.4	9.46
N386	012	012	1980	7.6	8.4	5.02	14.4	9.46
N386	012	028	1980	22.2	26.0	0.00	20.8	14.50
N386	012	028	1980	16.6	18.0	3.14	20.8	14.50
N386	012	028	1980	14.8	15.8	5.12	20.8	14.50
N386	012	028	1980	12.1	13.1	7.21	20.8	14.50
N386	012	028	1980	10.0	10.8	8.91	20.8	14.50
N386	012	028	1980	7.5	8.3	10.64	20.8	14.50
N386	012	029	1980	16.7	20.3	0.00	15.3	12.35
N386	012	029	1980	13.3	15.3	1.40	15.3	12.35
N386	012	029	1980	11.8	13.2	3.30	15.3	12.35
N386	012	029	1980	10.4	11.4	5.13	15.3	12.35
N386	012	029	1980	8.6	9.4	6.79	15.3	12.35
N386	012	029	1980	6.4	7.2	8.70	15.3	12.35
N378	001	001	1974	10.3	11.5	0.00	10.5	7.80
N378	001	001	1974	10.0	11.0	0.70	10.5	7.80
N378	001	001	1974	8.7	9.5	2.15	10.5	7.80
N378	001	001	1974	7.7	8.5	2.45	10.5	7.80
N378	001	001	1974	7.0	7.6	3.25	10.5	7.80
N378	001	001	1974	4.9	5.5	4.40	10.5	7.80
N378	001	002	1974	10.4	11.6	0.00	10.4	8.65
N378	001	002	1974	10.0	11.0	0.70	10.4	8.65
N378	001	002	1974	8.9	9.5	2.27	10.4	8.65
N378	001	002	1974	7.8	8.4	2.77	10.4	8.65
N378	001	002	1974	6.0	6.4	4.90	10.4	8.65
N378	001	002	1974	5.0	5.4	5.77	10.4	8.65
N378	001	003	1974	12.9	13.9	0.00	11.3	9.05
N378	001	003	1974	11.6	12.6	0.70	11.3	9.05
N378	001	003	1974	10.3	11.3	1.40	11.3	9.05
N378	001	003	1974	8.7	9.3	2.97	11.3	9.05
N378	001	003	1974	7.7	8.3	4.25	11.3	9.05
N378	001	003	1974	5.7	6.3	5.92	11.3	9.05
N378	001	003	1974	4.4	5.0	6.52	11.3	9.05
N378	001	004	1974	11.1	12.5	0.70	11.4	8.20
N378	001	004	1974	10.4	11.4	1.40	11.4	8.20
N378	001	004	1974	9.4	10.4	1.73	11.4	8.20
N378	001	004	1974	8.0	8.8	2.52	11.4	8.20
N378	001	004	1974	7.8	8.4	2.90	11.4	8.20
N378	001	004	1974	7.0	7.6	3.90	11.4	8.20
N378	001	004	1974	4.8	5.4	5.27	11.4	8.20
N378	001	005	1974	17.8	19.5	0.00	16.5	10.85
N378	001	005	1974	16.4	18.0	0.70	16.5	10.85
N378	001	005	1974	13.5	14.5	2.45	16.5	10.85
N378	001	005	1974	10.5	11.5	4.18	16.5	10.85
N378	001	005	1974	8.2	9.0	5.60	16.5	10.85
N378	001	005	1974	5.2	6.0	7.55	16.5	10.85
N378	001	006	1974	14.4	15.9	0.70	13.9	8.80

Appendix 7. Sectionol measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	001	006	1974	12.7	13.9	1.40	13.9	8.80
N378	001	006	1974	11.4	12.4	2.30	13.9	8.80
N378	001	006	1974	8.7	9.5	3.64	13.9	8.80
N378	001	006	1974	8.1	8.9	4.35	13.9	8.80
N378	001	006	1974	7.1	7.9	4.83	13.9	8.80
N378	001	006	1974	4.9	5.5	5.60	13.9	8.80
N378	001	007	1974	18.7	20.5	0.00	16.7	10.98
N378	001	007	1974	16.9	18.6	0.70	16.7	10.98
N378	001	007	1974	13.6	14.6	2.90	16.7	10.98
N378	001	007	1974	10.7	11.7	4.40	16.7	10.98
N378	001	007	1974	8.4	9.2	6.11	16.7	10.98
N378	001	007	1974	6.1	6.7	7.70	16.7	10.98
N378	001	008	1974	16.5	17.9	0.00	15.5	10.85
N378	001	008	1974	15.3	16.7	0.70	15.5	10.85
N378	001	008	1974	11.8	13.0	2.65	15.5	10.85
N378	001	008	1974	9.2	10.0	4.23	15.5	10.85
N378	001	008	1974	7.4	8.0	6.05	15.5	10.85
N378	001	008	1974	4.7	5.5	8.13	15.5	10.85
N378	001	009	1974	15.2	17.0	0.00	14.8	9.60
N378	001	009	1974	14.4	15.9	0.70	14.8	9.60
N378	001	009	1974	13.6	14.8	1.40	14.8	9.60
N378	001	009	1974	12.6	13.8	1.97	14.8	9.60
N378	001	009	1974	11.5	12.5	2.75	14.8	9.60
N378	001	009	1974	10.8	11.8	2.93	14.8	9.60
N378	001	009	1974	9.2	10.2	3.90	14.8	9.60
N378	001	009	1974	8.0	8.8	4.64	14.8	9.60
N378	001	009	1974	7.0	7.8	5.23	14.8	9.60
N378	001	010	1974	15.8	18.0	0.00	15.0	9.60
N378	001	010	1974	14.7	16.5	0.70	15.0	9.60
N378	001	010	1974	13.6	15.0	1.40	15.0	9.60
N378	001	010	1974	12.7	13.9	1.97	15.0	9.60
N378	001	010	1974	12.0	13.0	2.40	15.0	9.60
N378	001	010	1974	10.0	11.0	3.97	15.0	9.60
N378	001	010	1974	8.2	9.0	4.26	15.0	9.60
N378	001	010	1974	7.2	8.0	4.78	15.0	9.60
N378	001	010	1974	6.4	7.0	5.64	15.0	9.60
N378	001	010	1974	5.4	6.0	6.76	15.0	9.60
N378	001	011	1974	14.4	17.0	0.00	13.0	9.30
N378	001	011	1974	13.0	15.0	0.70	13.0	9.30
N378	001	011	1974	11.6	13.0	1.40	13.0	9.30
N378	001	011	1974	10.1	11.0	2.31	13.0	9.30
N378	001	011	1974	9.1	10.0	3.06	13.0	9.30
N378	001	011	1974	8.3	9.0	3.70	13.0	9.30
N378	001	011	1974	7.0	7.6	4.96	13.0	9.30
N378	001	011	1974	5.4	6.0	6.31	13.0	9.30
N378	001	011	1974	4.6	5.0	6.92	13.0	9.30
N378	001	012	1974	16.7	19.7	0.00	15.9	9.80
N378	001	012	1974	15.5	17.8	0.70	15.9	9.80
N378	001	012	1974	14.3	15.9	1.40	15.9	9.80
N378	001	012	1974	12.1	13.3	2.76	15.9	9.80

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	001	012	1974	7.3	8.3	5.65	15.9	9.80
N378	001	012	1974	4.9	5.7	6.90	15.9	9.80
N378	002	001	1974	14.8	16.4	0.70	14.4	10.40
N378	002	001	1974	13.4	14.4	1.40	14.4	10.40
N378	002	001	1974	12.4	13.4	2.13	14.4	10.40
N378	002	001	1974	11.6	12.4	2.77	14.4	10.40
N378	002	001	1974	10.4	11.2	3.69	14.4	10.40
N378	002	001	1974	8.3	9.1	5.36	14.4	10.40
N378	002	001	1974	7.6	8.4	5.87	14.4	10.40
N378	002	001	1974	6.5	7.1	6.81	14.4	10.40
N378	002	001	1974	5.6	6.2	7.45	14.4	10.40
N378	002	001	1974	4.8	5.4	8.20	14.4	10.40
N378	002	002	1974	17.1	18.7	0.00	15.9	10.30
N378	002	002	1974	15.9	17.3	0.70	15.9	10.30
N378	002	002	1974	14.7	15.9	1.40	15.9	10.30
N378	002	002	1974	10.1	11.1	3.98	15.9	10.30
N378	002	002	1974	7.6	8.4	6.00	15.9	10.30
N378	002	002	1974	5.3	5.9	7.45	15.9	10.30
N378	002	003	1974	15.5	17.9	0.00	13.7	10.75
N378	002	003	1974	14.0	15.8	0.70	13.7	10.75
N378	002	003	1974	12.5	13.7	1.40	13.7	10.75
N378	002	003	1974	10.8	11.8	2.86	13.7	10.75
N378	002	003	1974	9.9	10.7	3.88	13.7	10.75
N378	002	003	1974	8.9	9.7	4.34	13.7	10.75
N378	002	003	1974	7.9	8.7	5.10	13.7	10.75
N378	002	003	1974	6.1	6.7	6.77	13.7	10.75
N378	002	003	1974	5.1	5.7	7.49	13.7	10.75
N378	002	004	1974	14.4	16.6	0.00	13.8	10.75
N378	002	004	1974	13.6	15.2	0.70	13.8	10.75
N378	002	004	1974	12.8	13.8	1.40	13.8	10.75
N378	002	004	1974	11.4	12.4	2.46	13.8	10.75
N378	002	004	1974	10.9	11.7	2.95	13.8	10.75
N378	002	004	1974	10.0	10.8	3.93	13.8	10.75
N378	002	004	1974	9.0	9.8	4.60	13.8	10.75
N378	002	004	1974	8.0	8.8	5.15	13.8	10.75
N378	002	004	1974	5.2	5.8	7.36	13.8	10.75
N378	002	005	1974	17.0	20.4	0.00	15.2	11.40
N378	002	005	1974	15.4	17.8	0.70	15.2	11.40
N378	002	005	1974	13.8	15.2	1.40	15.2	11.40
N378	002	005	1974	11.7	12.7	3.30	15.2	11.40
N378	002	005	1974	6.9	7.7	6.87	15.2	11.40
N378	002	005	1974	4.8	5.4	9.17	15.2	11.40
N378	002	006	1974	16.5	18.3	0.00	15.5	10.20
N378	002	006	1974	15.5	16.9	0.70	15.5	10.20
N378	002	006	1974	14.5	15.5	1.40	15.5	10.20
N378	002	006	1974	10.6	11.4	3.75	15.5	10.20
N378	002	006	1974	7.2	8.0	5.76	15.5	10.20
N378	002	006	1974	4.9	5.5	7.10	15.5	10.20
N378	002	007	1974	13.6	16.2	0.00	13.2	9.30
N378	002	007	1974	12.9	14.7	0.70	13.2	9.30

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	002	007	1974	12.2	13.2	1.40	13.2	9.30
N378	002	007	1974	11.2	12.0	2.57	13.2	9.30
N378	002	007	1974	10.4	11.2	3.52	13.2	9.30
N378	002	007	1974	8.8	9.6	3.85	13.2	9.30
N378	002	007	1974	7.4	8.2	5.07	13.2	9.30
N378	002	007	1974	5.6	6.2	7.27	13.2	9.30
N378	002	008	1974	14.0	15.4	0.00	13.4	9.70
N378	002	008	1974	13.2	14.4	0.70	13.4	9.70
N378	002	008	1974	12.4	13.4	1.40	13.4	9.70
N378	002	008	1974	11.5	12.3	2.25	13.4	9.70
N378	002	008	1974	8.5	9.3	4.29	13.4	9.70
N378	002	008	1974	7.6	8.4	4.98	13.4	9.70
N378	002	008	1974	6.6	7.4	5.78	13.4	9.70
N378	002	008	1974	5.8	6.4	6.47	13.4	9.70
N378	002	008	1974	4.8	5.4	7.09	13.4	9.70
N378	002	009	1974	9.3	10.3	1.40	10.3	8.40
N378	002	009	1974	8.7	9.3	2.15	10.3	8.40
N378	002	009	1974	7.7	8.3	2.85	10.3	8.40
N378	002	009	1974	6.7	7.3	4.02	10.3	8.40
N378	002	009	1974	5.7	6.3	4.70	10.3	8.40
N378	002	009	1974	5.0	5.4	5.56	10.3	8.40
N378	002	010	1974	9.7	10.5	0.00	9.5	7.65
N378	002	010	1974	9.2	10.0	0.70	9.5	7.65
N378	002	010	1974	7.6	8.4	2.12	9.5	7.65
N378	002	010	1974	6.7	7.5	2.80	9.5	7.65
N378	002	010	1974	5.7	6.3	4.10	9.5	7.65
N378	002	010	1974	4.9	5.5	4.60	9.5	7.65
N378	002	011	1974	9.9	12.1	0.00	10.1	7.85
N378	002	011	1974	9.3	11.1	0.70	10.1	7.85
N378	002	011	1974	8.7	10.1	1.40	10.1	7.85
N378	002	011	1974	7.9	8.7	1.98	10.1	7.85
N378	002	011	1974	7.3	8.1	2.66	10.1	7.85
N378	002	011	1974	4.5	5.1	4.54	10.1	7.85
N378	002	012	1974	9.1	10.3	0.00	8.9	7.90
N378	002	012	1974	8.1	8.9	1.40	8.9	7.90
N378	002	012	1974	7.1	7.9	2.10	8.9	7.90
N378	002	012	1974	6.1	6.9	3.00	8.9	7.90
N378	002	012	1974	5.3	5.9	4.20	8.9	7.90
N378	003	001	1974	15.6	16.8	0.70	14.8	9.10
N378	003	001	1974	14.0	14.8	1.40	14.8	9.10
N378	003	001	1974	12.8	13.6	2.10	14.8	9.10
N378	003	001	1974	11.4	12.2	2.80	14.8	9.10
N378	003	001	1974	10.7	11.5	3.15	14.8	9.10
N378	003	001	1974	9.2	10.0	4.36	14.8	9.10
N378	003	001	1974	7.9	8.7	5.10	14.8	9.10
N378	003	001	1974	7.0	7.8	6.34	14.8	9.10
N378	003	001	1974	6.2	6.8	6.70	14.8	9.10
N378	003	001	1974	5.2	5.8	7.30	14.8	9.10
N378	003	002	1974	16.3	18.7	0.00	14.5	9.60
N378	003	002	1974	14.8	16.6	0.70	14.5	9.60

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	003	002	1974	13.3	14.5	1.40	14.5	9.60
N378	003	002	1974	12.5	13.5	2.40	14.5	9.60
N378	003	002	1974	11.9	12.9	3.01	14.5	9.60
N378	003	002	1974	10.5	11.5	3.50	14.5	9.60
N378	003	002	1974	9.7	10.5	4.05	14.5	9.60
N378	003	002	1974	8.7	9.5	4.48	14.5	9.60
N378	003	002	1974	6.8	7.5	5.84	14.5	9.60
N378	003	002	1974	5.8	6.5	6.60	14.5	9.60
N378	003	003	1974	14.0	15.0	0.00	13.4	8.20
N378	003	003	1974	13.2	14.2	0.70	13.4	8.20
N378	003	003	1974	12.4	13.4	1.40	13.4	8.20
N378	003	003	1974	9.6	10.4	3.10	13.4	8.20
N378	003	003	1974	8.6	9.4	3.96	13.4	8.20
N378	003	003	1974	7.2	8.0	4.81	13.4	8.20
N378	003	003	1974	6.3	7.1	5.51	13.4	8.20
N378	003	003	1974	5.8	6.4	5.96	13.4	8.20
N378	003	003	1974	4.8	5.4	6.17	13.4	8.20
N378	003	004	1974	15.8	16.8	0.00	14.0	10.50
N378	003	004	1974	14.4	15.4	0.70	14.0	10.50
N378	003	004	1974	13.0	14.0	1.40	14.0	10.50
N378	003	004	1974	11.8	12.6	2.12	14.0	10.50
N378	003	004	1974	11.0	11.9	3.16	14.0	10.50
N378	003	004	1974	10.4	11.2	3.90	14.0	10.50
N378	003	004	1974	9.0	9.9	4.25	14.0	10.50
N378	003	004	1974	8.1	9.0	5.18	14.0	10.50
N378	003	004	1974	7.2	8.0	5.76	14.0	10.50
N378	003	004	1974	4.4	5.0	8.05	14.0	10.50
N378	003	005	1974	9.0	10.6	0.00	8.2	7.40
N378	003	005	1974	8.2	9.4	0.70	8.2	7.40
N378	003	005	1974	7.4	8.2	1.40	8.2	7.40
N378	003	005	1974	6.3	7.1	2.44	8.2	7.40
N378	003	005	1974	5.4	6.2	3.35	8.2	7.40
N378	003	006	1974	9.5	10.5	0.70	9.1	6.85
N378	003	006	1974	8.2	9.1	1.40	9.1	6.85
N378	003	006	1974	7.3	8.1	2.20	9.1	6.85
N378	003	006	1974	6.3	7.1	2.50	9.1	6.85
N378	003	006	1974	5.6	6.4	3.36	9.1	6.85
N378	003	006	1974	4.2	5.0	3.55	9.1	6.85
N378	003	007	1974	11.2	12.4	0.00	9.2	7.10
N378	003	007	1974	9.8	10.8	0.70	9.2	7.10
N378	003	007	1974	7.4	8.2	2.25	9.2	7.10
N378	003	007	1974	6.4	7.2	2.78	9.2	7.10
N378	003	007	1974	5.4	6.2	3.26	9.2	7.10
N378	003	007	1974	4.4	5.2	4.61	9.2	7.10
N378	003	008	1974	10.3	11.1	0.00	8.9	6.65
N378	003	008	1974	9.2	10.0	0.70	8.9	6.65
N378	003	008	1974	8.1	8.9	1.40	8.9	6.65
N378	003	008	1974	7.0	7.8	2.07	8.9	6.65
N378	003	008	1974	6.1	6.9	2.85	8.9	6.65
N378	003	009	1974	13.4	15.0	0.00	11.8	9.20

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	003	009	1974	10.8	11.8	1.40	11.8	9.20
N378	003	009	1974	9.8	10.8	2.32	11.8	9.20
N378	003	009	1974	8.9	9.9	3.08	11.8	9.20
N378	003	009	1974	7.8	8.8	3.86	11.8	9.20
N378	003	009	1974	7.0	7.8	4.68	11.8	9.20
N378	003	009	1974	6.0	6.8	5.12	11.8	9.20
N378	003	010	1974	13.5	14.8	0.00	13.0	7.90
N378	003	010	1974	11.9	13.0	1.40	13.0	7.90
N378	003	010	1974	11.0	12.0	1.88	13.0	7.90
N378	003	010	1974	10.2	11.0	2.48	13.0	7.90
N378	003	010	1974	8.4	9.2	2.88	13.0	7.90
N378	003	010	1974	7.2	8.0	3.64	13.0	7.90
N378	003	010	1974	5.7	6.5	4.34	13.0	7.90
N378	003	010	1974	4.5	5.1	5.62	13.0	7.90
N378	003	011	1974	12.5	13.5	0.00	11.1	7.90
N378	003	011	1974	11.3	12.3	0.70	11.1	7.90
N378	003	011	1974	10.1	11.1	1.40	11.1	7.90
N378	003	011	1974	9.2	10.0	1.90	11.1	7.90
N378	003	011	1974	7.7	8.5	2.86	11.1	7.90
N378	003	011	1974	6.3	7.1	4.28	11.1	7.90
N378	003	011	1974	4.5	5.1	4.62	11.1	7.90
N378	003	012	1974	13.5	14.7	0.00	11.3	7.25
N378	003	012	1974	12.0	13.0	0.70	11.3	7.25
N378	003	012	1974	10.5	11.3	1.40	11.3	7.25
N378	003	012	1974	9.4	10.2	1.64	11.3	7.25
N378	003	012	1974	7.7	8.3	2.88	11.3	7.25
N378	003	012	1974	6.6	7.2	3.25	11.3	7.25
N378	003	012	1974	4.7	5.3	4.96	11.3	7.25
N378	005	003	1976	17.0	20.5	0.00	16.5	12.40
N378	005	003	1976	15.6	18.5	0.70	16.5	12.40
N378	005	003	1976	13.4	14.7	2.63	16.5	12.40
N378	005	003	1976	11.8	12.8	4.46	16.5	12.40
N378	005	003	1976	10.0	10.9	6.06	16.5	12.40
N378	005	003	1976	6.5	7.1	8.82	16.5	12.40
N378	005	003	1976	4.7	5.1	10.27	16.5	12.40
N378	005	005	1976	15.8	18.6	0.70	17.3	10.60
N378	005	005	1976	15.3	17.3	1.40	17.3	10.60
N378	005	005	1976	14.3	15.3	2.45	17.3	10.60
N378	005	005	1976	10.4	11.1	5.75	17.3	10.60
N378	005	005	1976	9.4	10.1	6.54	17.3	10.60
N378	005	005	1976	5.7	6.3	6.80	17.3	10.60
N378	005	005	1976	4.5	4.9	7.76	17.3	10.60
N378	005	006	1976	17.0	19.2	0.70	18.4	15.00
N378	005	006	1976	16.7	18.4	1.40	18.4	15.00
N378	005	006	1976	13.5	14.4	3.90	18.4	15.00
N378	005	006	1976	11.3	12.1	6.60	18.4	15.00
N378	005	006	1976	9.6	10.3	8.33	18.4	15.00
N378	005	006	1976	7.5	8.2	10.19	18.4	15.00
N378	005	006	1976	5.6	6.2	11.30	18.4	15.00
N378	005	006	1976	4.4	5.2	12.60	18.4	15.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	005	007	1976	16.2	18.1	0.00	15.5	12.25
N378	005	007	1976	15.3	16.8	0.70	15.5	12.25
N378	005	007	1976	12.5	13.3	3.80	15.5	12.25
N378	005	007	1976	9.9	10.7	6.32	15.5	12.25
N378	005	007	1976	8.2	9.0	8.00	15.5	12.25
N378	005	007	1976	6.4	7.2	9.00	15.5	12.25
N378	005	009	1976	16.3	18.0	0.70	16.7	13.00
N378	005	009	1976	15.5	16.7	1.40	16.7	13.00
N378	005	009	1976	13.1	14.1	4.22	16.7	13.00
N378	005	009	1976	11.1	12.0	5.90	16.7	13.00
N378	005	009	1976	8.9	9.7	8.20	16.7	13.00
N378	005	009	1976	7.2	7.8	9.68	16.7	13.00
N378	005	011	1976	18.6	21.5	0.00	16.3	13.76
N378	005	011	1976	15.2	16.3	1.40	16.3	13.76
N378	005	011	1976	13.7	14.4	2.60	16.3	13.76
N378	005	011	1976	12.2	12.8	4.50	16.3	13.76
N378	005	011	1976	10.6	11.0	6.52	16.3	13.76
N378	005	011	1976	6.5	6.9	10.06	16.3	13.76
N378	005	011	1976	4.6	4.8	11.58	16.3	13.76
N378	005	016	1976	17.5	20.5	0.00	17.5	14.82
N378	005	016	1976	16.8	19.0	0.70	17.5	14.82
N378	005	016	1976	16.1	17.5	1.40	17.5	14.82
N378	005	016	1976	14.3	15.3	3.43	17.5	14.82
N378	005	016	1976	8.6	9.2	9.15	17.5	14.82
N378	005	016	1976	6.5	7.1	10.85	17.5	14.82
N378	005	016	1976	4.7	5.3	12.10	17.5	14.82
N378	005	019	1976	15.4	18.2	0.00	16.2	14.30
N378	005	019	1976	15.0	17.2	0.70	16.2	14.30
N378	005	019	1976	14.6	16.2	1.40	16.2	14.30
N378	005	019	1976	12.9	14.1	2.60	16.2	14.30
N378	005	019	1976	6.5	7.3	9.00	16.2	14.30
N378	005	019	1976	4.6	5.2	11.10	16.2	14.30
N378	005	022	1976	16.5	18.7	0.00	15.7	13.09
N378	005	022	1976	14.5	15.7	1.40	15.7	13.09
N378	005	022	1976	12.1	12.9	4.00	15.7	13.09
N378	005	022	1976	10.5	11.4	5.78	15.7	13.09
N378	005	022	1976	6.7	7.3	9.58	15.7	13.09
N378	005	022	1976	4.9	5.5	11.05	15.7	13.09
N378	005	031	1976	18.0	20.8	0.00	17.0	11.00
N378	005	031	1976	16.9	18.9	0.70	17.0	11.00
N378	005	031	1976	15.8	17.0	1.40	17.0	11.00
N378	005	031	1976	12.6	13.5	3.87	17.0	11.00
N378	005	031	1976	10.3	11.0	5.25	17.0	11.00
N378	005	031	1976	6.2	6.8	8.10	17.0	11.00
N378	005	031	1976	5.2	5.7	9.32	17.0	11.00
N378	006	001	1976	28.8	31.8	0.00	25.2	12.40
N378	006	001	1976	26.0	28.5	0.70	25.2	12.40
N378	006	001	1976	23.2	25.2	1.40	25.2	12.40
N378	006	001	1976	21.5	23.1	2.05	25.2	12.40
N378	006	001	1976	20.1	21.4	3.00	25.2	12.40

Appendix 7. Sectional measurement data for Golden Downs.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	006	001	1976	18.4	19.3	4.00	25.2	12.40
N378	006	001	1976	15.5	16.4	5.48	25.2	12.40
N378	006	001	1976	12.1	12.9	7.10	25.2	12.40
N378	006	001	1976	7.2	7.8	8.90	25.2	12.40
N378	006	001	1976	4.8	5.2	10.70	25.2	12.40
N378	006	009	1976	22.7	25.2	0.00	22.6	12.20
N378	006	009	1976	21.9	23.9	0.70	22.6	12.20
N378	006	009	1976	21.1	22.6	1.40	22.6	12.20
N378	006	009	1976	19.2	20.2	2.75	22.6	12.20
N378	006	009	1976	17.5	18.5	4.00	22.6	12.20
N378	006	009	1976	12.8	13.6	7.20	22.6	12.20
N378	006	009	1976	10.5	11.3	8.25	22.6	12.20
N378	006	009	1976	7.2	8.0	8.80	22.6	12.20
N378	006	010	1976	17.8	20.1	0.00	17.5	11.60
N378	006	010	1976	16.8	18.8	0.70	17.5	11.60
N378	006	010	1976	15.8	17.5	1.40	17.5	11.60
N378	006	010	1976	13.4	14.7	3.20	17.5	11.60
N378	006	010	1976	10.4	11.3	5.83	17.5	11.60
N378	006	010	1976	8.6	9.5	7.00	17.5	11.60
N378	006	010	1976	4.6	5.2	9.71	17.5	11.60
N378	006	020	1976	25.5	29.7	0.00	24.9	13.40
N378	006	020	1976	22.7	24.9	1.40	24.9	13.40
N378	006	020	1976	21.7	23.3	2.30	24.9	13.40
N378	006	020	1976	19.4	20.4	3.15	24.9	13.40
N378	006	020	1976	15.9	16.3	5.50	24.9	13.40
N378	006	020	1976	12.8	13.2	7.60	24.9	13.40
N378	006	020	1976	11.0	11.4	8.40	24.9	13.40
N378	006	020	1976	9.1	9.5	9.50	24.9	13.40
N378	006	020	1976	6.7	7.0	10.55	24.9	13.40
N378	006	020	1976	4.8	5.0	11.65	24.9	13.40
N378	006	021	1976	18.3	20.0	0.70	18.7	12.90
N378	006	021	1976	17.6	18.7	1.40	18.7	12.90
N378	006	021	1976	15.5	16.4	3.10	18.7	12.90
N378	006	021	1976	13.6	14.4	4.50	18.7	12.90
N378	006	021	1976	11.5	12.3	5.60	18.7	12.90
N378	006	021	1976	9.6	10.2	6.90	18.7	12.90
N378	006	021	1976	5.0	5.4	10.67	18.7	12.90
N378	006	026	1976	21.5	24.1	0.70	21.9	13.80
N378	006	026	1976	20.0	21.9	1.40	21.9	13.80
N378	006	026	1976	18.6	19.8	2.43	21.9	13.80
N378	006	026	1976	16.5	17.5	3.90	21.9	13.80
N378	006	026	1976	14.3	15.1	5.50	21.9	13.80
N378	006	026	1976	12.1	12.8	6.66	21.9	13.80
N378	006	026	1976	10.4	11.0	7.60	21.9	13.80
N378	006	026	1976	8.6	9.0	8.90	21.9	13.80
N378	006	026	1976	6.6	7.0	10.18	21.9	13.80
N378	006	033	1976	19.1	21.2	0.00	17.0	12.35
N378	006	033	1976	17.4	19.1	0.70	17.0	12.35
N378	006	033	1976	15.7	17.0	1.40	17.0	12.35
N378	006	033	1976	14.1	15.0	3.10	17.0	12.35

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	006	033	1976	12.6	13.4	4.50	17.0	12.35
N378	006	033	1976	6.5	7.1	8.57	17.0	12.35
N378	006	033	1976	4.1	4.7	9.80	17.0	12.35
N378	006	035	1976	22.2	25.4	0.00	19.8	12.22
N378	006	035	1976	17.6	19.8	1.40	19.8	12.22
N378	006	035	1976	15.5	16.9	3.22	19.8	12.22
N378	006	035	1976	12.9	14.5	4.66	19.8	12.22
N378	006	035	1976	10.4	11.7	6.60	19.8	12.22
N378	006	035	1976	9.0	10.0	7.90	19.8	12.22
N378	006	035	1976	5.7	6.2	10.98	19.8	12.22
N378	006	037	1976	26.1	28.4	0.00	25.0	15.30
N378	006	037	1976	24.6	26.7	0.70	25.0	15.30
N378	006	037	1976	23.1	25.0	1.40	25.0	15.30
N378	006	037	1976	21.7	23.4	1.95	25.0	15.30
N378	006	037	1976	19.9	21.0	2.64	25.0	15.30
N378	006	037	1976	15.4	16.0	5.20	25.0	15.30
N378	006	037	1976	13.5	14.1	7.90	25.0	15.30
N378	006	037	1976	11.1	11.7	8.85	25.0	15.30
N378	006	037	1976	8.4	8.8	11.30	25.0	15.30
N378	006	037	1976	4.6	5.0	13.40	25.0	15.30
N378	007	001	1976	20.8	24.6	0.00	19.0	15.10
N378	007	001	1976	18.9	21.8	0.70	19.0	15.10
N378	007	001	1976	17.0	19.0	1.40	19.0	15.10
N378	007	001	1976	15.1	16.4	2.60	19.0	15.10
N378	007	001	1976	13.5	14.5	4.25	19.0	15.10
N378	007	001	1976	11.6	12.5	6.15	19.0	15.10
N378	007	001	1976	9.8	10.6	8.52	19.0	15.10
N378	007	001	1976	4.2	4.8	13.68	19.0	15.10
N378	007	006	1976	19.2	21.4	0.70	18.6	10.70
N378	007	006	1976	17.1	18.6	1.40	18.6	10.70
N378	007	006	1976	14.6	15.5	3.35	18.6	10.70
N378	007	006	1976	13.6	14.4	4.18	18.6	10.70
N378	007	006	1976	11.6	12.3	5.71	18.6	10.70
N378	007	006	1976	9.6	10.2	6.34	18.6	10.70
N378	007	006	1976	5.5	5.9	8.60	18.6	10.70
N378	007	006	1976	4.5	4.9	9.00	18.6	10.70
N378	007	007	1976	24.1	26.4	0.00	22.0	12.25
N378	007	007	1976	22.3	24.2	0.70	22.0	12.25
N378	007	007	1976	20.5	22.0	1.40	22.0	12.25
N378	007	007	1976	18.8	20.0	2.44	22.0	12.25
N378	007	007	1976	17.1	18.0	3.21	22.0	12.25
N378	007	007	1976	15.3	16.1	4.00	22.0	12.25
N378	007	007	1976	14.3	15.2	5.32	22.0	12.25
N378	007	007	1976	8.7	9.5	7.55	22.0	12.25
N378	007	007	1976	7.6	8.2	8.50	22.0	12.25
N378	007	007	1976	6.1	6.7	9.25	22.0	12.25
N378	007	011	1976	20.6	22.8	0.00	20.0	14.15
N378	007	011	1976	19.5	21.4	0.70	20.0	14.15
N378	007	011	1976	18.4	20.0	1.40	20.0	14.15
N378	007	011	1976	17.2	18.1	2.26	20.0	14.15

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	007	011	1976	11.1	11.7	7.65	20.0	14.15
N378	007	011	1976	8.9	9.5	9.25	20.0	14.15
N378	007	011	1976	6.9	7.5	10.55	20.0	14.15
N378	007	011	1976	5.1	5.5	11.78	20.0	14.15
N378	007	017	1976	22.5	25.3	0.00	19.7	13.10
N378	007	017	1976	20.1	22.5	0.70	19.7	13.10
N378	007	017	1976	16.1	17.8	2.85	19.7	13.10
N378	007	017	1976	14.1	15.4	4.24	19.7	13.10
N378	007	017	1976	12.3	13.4	6.20	19.7	13.10
N378	007	017	1976	10.7	11.5	7.50	19.7	13.10
N378	007	017	1976	8.8	9.6	9.18	19.7	13.10
N378	007	017	1976	6.3	6.9	10.38	19.7	13.10
N378	007	021	1976	19.4	22.7	0.00	17.3	11.44
N378	007	021	1976	17.7	20.0	0.70	17.3	11.44
N378	007	021	1976	14.7	15.5	3.08	17.3	11.44
N378	007	021	1976	10.6	11.3	5.46	17.3	11.44
N378	007	021	1976	9.0	9.6	6.95	17.3	11.44
N378	007	021	1976	4.9	5.5	7.37	17.3	11.44
N378	007	025	1976	20.6	23.9	0.00	19.5	13.20
N378	007	025	1976	16.7	17.4	3.02	19.5	13.20
N378	007	025	1976	14.9	15.5	4.70	19.5	13.20
N378	007	025	1976	12.6	13.2	6.54	19.5	13.20
N378	007	025	1976	10.2	10.8	7.65	19.5	13.20
N378	007	025	1976	8.9	9.3	8.20	19.5	13.20
N378	007	025	1976	5.6	6.0	10.80	19.5	13.20
N378	007	025	1976	3.8	4.2	11.42	19.5	13.20
N378	007	026	1976	15.3	17.4	0.70	15.9	12.50
N378	007	026	1976	14.5	15.9	1.40	15.9	12.50
N378	007	026	1976	12.2	13.0	3.50	15.9	12.50
N378	007	026	1976	10.4	11.0	5.45	15.9	12.50
N378	007	026	1976	8.2	8.8	7.91	15.9	12.50
N378	007	026	1976	6.8	7.2	8.96	15.9	12.50
N378	007	027	1976	18.4	21.0	0.00	16.0	10.87
N378	007	027	1976	16.5	18.5	0.70	16.0	10.87
N378	007	027	1976	14.6	16.0	1.40	16.0	10.87
N378	007	027	1976	11.4	12.0	4.80	16.0	10.87
N378	007	027	1976	9.2	9.8	6.98	16.0	10.87
N378	007	027	1976	7.4	7.8	7.34	16.0	10.87
N378	007	027	1976	6.0	6.4	8.35	16.0	10.87
N378	007	042	1976	22.1	25.9	0.00	19.5	12.55
N378	007	042	1976	19.8	22.7	0.70	19.5	12.55
N378	007	042	1976	17.5	19.5	1.40	19.5	12.55
N378	007	042	1976	13.7	15.0	4.80	19.5	12.55
N378	007	042	1976	12.2	13.2	5.77	19.5	12.55
N378	007	042	1976	10.3	10.9	7.80	19.5	12.55
N378	007	042	1976	6.1	6.7	9.45	19.5	12.55
N378	007	042	1976	4.4	5.0	10.60	19.5	12.55
N378	008	002	1976	25.0	27.8	0.00	22.0	11.45
N378	008	002	1976	20.6	22.0	1.40	22.0	11.45
N378	008	002	1976	17.0	17.9	3.70	22.0	11.45

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	008	002	1976	15.1	15.9	5.30	22.0	11.45
N378	008	002	1976	12.0	12.8	7.08	22.0	11.45
N378	008	002	1976	10.4	11.0	7.90	22.0	11.45
N378	008	002	1976	7.7	8.3	8.95	22.0	11.45
N378	008	002	1976	5.7	6.3	9.48	22.0	11.45
N378	008	002	1976	5.1	5.5	10.01	22.0	11.45
N378	008	008	1976	18.0	19.8	1.40	19.8	12.90
N378	008	008	1976	15.7	17.1	3.33	19.8	12.90
N378	008	008	1976	14.1	15.2	4.84	19.8	12.90
N378	008	008	1976	11.9	12.7	6.52	19.8	12.90
N378	008	008	1976	9.9	10.7	8.32	19.8	12.90
N378	008	008	1976	7.7	8.1	9.40	19.8	12.90
N378	008	008	1976	5.8	6.2	10.40	19.8	12.90
N378	008	008	1976	4.6	5.0	10.92	19.8	12.90
N378	008	014	1976	18.5	20.8	0.00	17.4	14.02
N378	008	014	1976	16.1	17.4	1.40	17.4	14.02
N378	008	014	1976	14.1	14.9	3.65	17.4	14.02
N378	008	014	1976	12.2	12.8	5.72	17.4	14.02
N378	008	014	1976	10.0	10.4	7.65	17.4	14.02
N378	008	014	1976	5.5	5.9	11.18	17.4	14.02
N378	008	014	1976	4.4	4.8	11.92	17.4	14.02
N378	008	016	1976	20.0	23.2	0.00	18.4	14.60
N378	008	016	1976	18.6	20.8	0.70	18.4	14.60
N378	008	016	1976	17.2	18.4	1.40	18.4	14.60
N378	008	016	1976	13.8	14.4	5.14	18.4	14.60
N378	008	016	1976	11.9	12.3	7.10	18.4	14.60
N378	008	016	1976	7.9	8.1	10.40	18.4	14.60
N378	008	016	1976	5.8	6.0	11.73	18.4	14.60
N378	008	016	1976	4.7	4.9	12.07	18.4	14.60
N378	008	017	1976	18.1	20.5	0.70	17.9	12.90
N378	008	017	1976	16.3	17.9	1.40	17.9	12.90
N378	008	017	1976	14.9	15.8	3.02	17.9	12.90
N378	008	017	1976	11.5	12.6	5.47	17.9	12.90
N378	008	017	1976	9.6	10.6	7.94	17.9	12.90
N378	008	017	1976	5.2	6.0	11.10	17.9	12.90
N378	008	017	1976	4.2	5.0	12.10	17.9	12.90
N378	008	022	1976	22.2	25.5	0.00	21.5	12.85
N378	008	022	1976	21.0	23.5	0.70	21.5	12.85
N378	008	022	1976	19.8	21.5	1.40	21.5	12.85
N378	008	022	1976	18.2	19.6	2.55	21.5	12.85
N378	008	022	1976	16.1	17.0	4.14	21.5	12.85
N378	008	022	1976	13.6	14.5	5.68	21.5	12.85
N378	008	022	1976	9.4	10.0	8.50	21.5	12.85
N378	008	022	1976	5.9	6.5	9.98	21.5	12.85
N378	008	022	1976	4.3	4.7	11.10	21.5	12.85
N378	008	028	1976	17.8	19.6	0.00	17.2	12.00
N378	008	028	1976	17.0	18.4	0.70	17.2	12.00
N378	008	028	1976	12.9	13.5	6.10	17.2	12.00
N378	008	028	1976	10.4	11.0	7.40	17.2	12.00
N378	008	028	1976	8.0	8.6	8.56	17.2	12.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	008	028	1976	5.6	6.2	10.12	17.2	12.00
N378	008	028	1976	4.8	5.4	10.65	17.2	12.00
N378	008	031	1976	20.5	24.6	0.00	20.4	13.30
N378	008	031	1976	18.9	20.4	1.40	20.4	13.30
N378	008	031	1976	17.9	18.8	2.26	20.4	13.30
N378	008	031	1976	15.8	16.6	4.15	20.4	13.30
N378	008	031	1976	13.9	14.7	5.75	20.4	13.30
N378	008	031	1976	11.9	12.7	7.03	20.4	13.30
N378	008	031	1976	7.6	8.0	9.59	20.4	13.30
N378	008	031	1976	5.9	6.3	10.67	20.4	13.30
N378	008	031	1976	4.4	4.8	11.47	20.4	13.30
N378	008	037	1976	21.5	23.6	0.00	18.6	13.58
N378	008	037	1976	19.2	21.1	0.70	18.6	13.58
N378	008	037	1976	16.9	18.6	1.40	18.6	13.58
N378	008	037	1976	15.3	16.4	2.86	18.6	13.58
N378	008	037	1976	11.6	12.5	5.92	18.6	13.58
N378	008	037	1976	9.4	10.4	7.95	18.6	13.58
N378	008	037	1976	8.1	8.7	9.56	18.6	13.58
N378	008	037	1976	4.4	4.8	12.03	18.6	13.58
N378	008	039	1976	20.0	23.2	0.00	19.6	13.20
N378	008	039	1976	18.8	21.4	0.70	19.6	13.20
N378	008	039	1976	17.6	19.6	1.40	19.6	13.20
N378	008	039	1976	16.7	17.9	3.00	19.6	13.20
N378	008	039	1976	14.8	15.8	4.46	19.6	13.20
N378	008	039	1976	13.0	13.8	5.79	19.6	13.20
N378	008	039	1976	10.6	11.6	7.19	19.6	13.20
N378	008	039	1976	6.9	7.5	10.26	19.6	13.20
N378	001	001	1978	30.2	35.0	0.00	28.8	15.20
N378	001	001	1978	28.1	31.9	0.70	28.8	15.20
N378	001	001	1978	26.0	28.8	1.40	28.8	15.20
N378	001	001	1978	22.1	23.8	3.30	28.8	15.20
N378	001	001	1978	13.0	13.8	8.60	28.8	15.20
N378	001	001	1978	8.4	8.8	10.40	28.8	15.20
N378	001	021	1978	23.0	25.8	0.00	22.2	16.50
N378	001	021	1978	21.7	24.0	0.70	22.2	16.50
N378	001	021	1978	20.3	22.2	1.40	22.2	16.50
N378	001	021	1978	18.4	19.7	3.40	22.2	16.50
N378	001	021	1978	13.8	14.7	8.20	22.2	16.50
N378	001	021	1978	8.6	9.0	12.00	22.2	16.50
N378	001	020	1978	22.5	25.3	0.00	22.5	15.90
N378	001	020	1978	21.5	23.9	0.70	22.5	15.90
N378	001	020	1978	20.5	22.5	1.40	22.5	15.90
N378	001	020	1978	19.0	20.0	3.20	22.5	15.90
N378	001	020	1978	16.7	17.5	5.30	22.5	15.90
N378	001	020	1978	9.8	10.0	10.70	22.5	15.90
N378	001	100	1978	29.3	32.5	0.00	28.5	16.00
N378	001	100	1978	27.5	30.5	0.70	28.5	16.00
N378	001	100	1978	21.5	23.5	3.30	28.5	16.00
N378	001	100	1978	17.5	18.7	6.60	28.5	16.00
N378	001	100	1978	13.2	13.8	8.70	28.5	16.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	001	100	1978	7.7	8.1	12.40	28.5	16.00
N378	001	101	1978	18.2	20.2	0.70	18.9	14.50
N378	001	101	1978	17.3	18.9	1.40	18.9	14.50
N378	001	101	1978	15.6	16.4	3.30	18.9	14.50
N378	001	101	1978	13.1	13.9	6.00	18.9	14.50
N378	001	101	1978	10.9	11.5	8.10	18.9	14.50
N378	001	101	1978	8.3	8.7	10.30	18.9	14.50
N378	001	103	1978	25.5	27.7	0.00	24.5	15.40
N378	001	103	1978	23.9	26.1	0.70	24.5	15.40
N378	001	103	1978	22.3	24.5	1.40	24.5	15.40
N378	001	103	1978	20.8	22.0	3.07	24.5	15.40
N378	001	103	1978	16.6	17.2	5.97	24.5	15.40
N378	001	103	1978	11.6	12.0	8.80	24.5	15.40
N378	001	103	1978	9.1	9.5	10.70	24.5	15.40
N378	001	103	1978	6.5	6.7	12.80	24.5	15.40
N378	002	004	1978	26.6	32.2	0.00	24.6	15.60
N378	002	004	1978	24.0	28.4	0.70	24.6	15.60
N378	002	004	1978	21.4	24.6	1.40	24.6	15.60
N378	002	004	1978	20.1	22.1	2.85	24.6	15.60
N378	002	004	1978	16.2	17.1	5.65	24.6	15.60
N378	002	004	1978	14.2	14.6	7.48	24.6	15.60
N378	002	004	1978	12.0	12.4	9.15	24.6	15.60
N378	002	004	1978	9.0	9.4	10.96	24.6	15.60
N378	002	019	1978	27.7	29.7	1.40	29.7	18.45
N378	002	019	1978	23.2	24.6	4.70	29.7	18.45
N378	002	019	1978	20.0	21.0	8.40	29.7	18.45
N378	002	019	1978	13.6	14.4	10.80	29.7	18.45
N378	002	019	1978	8.9	9.5	13.40	29.7	18.45
N378	002	019	1978	4.6	4.8	15.75	29.7	18.45
N378	002	100	1978	28.8	33.5	0.00	26.9	16.10
N378	002	100	1978	26.5	30.2	0.70	26.9	16.10
N378	002	100	1978	20.0	21.3	4.90	26.9	16.10
N378	002	100	1978	15.5	16.4	8.40	26.9	16.10
N378	002	100	1978	11.7	12.5	11.40	26.9	16.10
N378	002	100	1978	6.6	7.0	14.35	26.9	16.10
N378	002	101	1978	27.3	32.2	0.00	25.8	17.00
N378	002	101	1978	25.5	29.0	0.70	25.8	17.00
N378	002	101	1978	23.7	25.8	1.40	25.8	17.00
N378	002	101	1978	15.2	15.8	7.80	25.8	17.00
N378	002	101	1978	10.9	11.5	11.15	25.8	17.00
N378	002	101	1978	5.8	6.0	14.10	25.8	17.00
N378	002	102	1978	20.8	23.7	0.00	19.9	15.60
N378	002	102	1978	19.6	21.8	0.70	19.9	15.60
N378	002	102	1978	16.6	17.4	3.90	19.9	15.60
N378	002	102	1978	11.7	12.2	8.60	19.9	15.60
N378	002	102	1978	9.1	9.5	10.15	19.9	15.60
N378	002	102	1978	6.8	7.0	12.20	19.9	15.60
N378	002	102	1978	4.8	5.0	13.65	19.9	15.60
N378	002	103	1978	19.3	23.1	0.00	19.1	16.00
N378	002	103	1978	18.3	21.1	0.70	19.1	16.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	002	103	1978	15.6	16.6	2.70	19.1	16.00
N378	002	103	1978	13.6	14.2	6.00	19.1	16.00
N378	002	103	1978	11.3	11.9	8.30	19.1	16.00
N378	002	103	1978	8.5	8.9	11.70	19.1	16.00
N378	002	103	1978	5.6	5.8	14.35	19.1	16.00
N378	003	001	1978	24.4	27.2	0.00	22.0	15.90
N378	003	001	1978	22.3	24.6	0.70	22.0	15.90
N378	003	001	1978	20.2	22.0	1.40	22.0	15.90
N378	003	001	1978	16.7	17.4	6.08	22.0	15.90
N378	003	001	1978	14.0	14.4	8.05	22.0	15.90
N378	003	001	1978	11.5	11.7	9.80	22.0	15.90
N378	003	001	1978	7.1	7.3	12.80	22.0	15.90
N378	003	003	1978	30.7	33.5	0.00	27.1	16.40
N378	003	003	1978	27.7	30.3	0.70	27.1	16.40
N378	003	003	1978	24.8	27.1	1.40	27.1	16.40
N378	003	003	1978	16.2	17.1	6.40	27.1	16.40
N378	003	003	1978	11.4	12.1	9.75	27.1	16.40
N378	003	003	1978	6.8	7.2	12.80	27.1	16.40
N378	003	009	1978	27.8	30.5	0.70	28.0	19.80
N378	003	009	1978	26.3	28.0	1.40	28.0	19.80
N378	003	009	1978	21.6	23.0	5.10	28.0	19.80
N378	003	009	1978	17.0	18.0	8.40	28.0	19.80
N378	003	009	1978	13.1	13.5	11.60	28.0	19.80
N378	003	011	1978	28.0	32.6	0.00	26.0	16.90
N378	003	011	1978	23.0	26.0	1.40	26.0	16.90
N378	003	011	1978	19.7	21.5	4.00	26.0	16.90
N378	003	011	1978	15.5	16.5	8.40	26.0	16.90
N378	003	011	1978	10.9	11.5	11.30	26.0	16.90
N378	003	022	1978	22.3	25.5	0.00	21.1	15.60
N378	003	022	1978	20.7	23.3	0.70	21.1	15.60
N378	003	022	1978	19.1	21.1	1.40	21.1	15.60
N378	003	022	1978	17.0	18.6	3.11	21.1	15.60
N378	003	022	1978	10.8	11.2	9.45	21.1	15.60
N378	003	022	1978	8.2	8.4	12.00	21.1	15.60
N378	003	022	1978	6.1	6.3	14.30	21.1	15.60
N378	003	100	1978	24.2	27.6	0.00	23.6	17.80
N378	003	100	1978	23.0	25.6	0.70	23.6	17.80
N378	003	100	1978	20.1	21.1	2.05	23.6	17.80
N378	003	100	1978	17.8	18.4	5.45	23.6	17.80
N378	003	100	1978	15.5	16.1	7.05	23.6	17.80
N378	003	100	1978	12.8	13.2	9.40	23.6	17.80
N378	003	100	1978	7.6	7.8	13.30	23.6	17.80
N378	003	100	1978	5.7	5.9	15.00	23.6	17.80
N378	004	022	1978	30.4	34.0	0.00	29.0	15.80
N378	004	022	1978	26.6	29.0	1.40	29.0	15.80
N378	004	022	1978	22.3	23.7	2.60	29.0	15.80
N378	004	022	1978	18.1	19.1	5.45	29.0	15.80
N378	004	022	1978	13.2	14.0	8.55	29.0	15.80
N378	004	022	1978	8.6	9.0	10.25	29.0	15.80
N378	004	025	1978	26.5	29.3	0.00	21.7	17.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	004	025	1978	23.3	25.5	0.70	21.7	17.00
N378	004	025	1978	18.4	19.4	4.30	21.7	17.00
N378	004	025	1978	16.1	16.7	6.40	21.7	17.00
N378	004	025	1978	13.5	13.9	8.31	21.7	17.00
N378	004	025	1978	8.9	9.1	12.05	21.7	17.00
N378	004	025	1978	6.2	6.4	14.05	21.7	17.00
N378	004	031	1978	30.5	34.7	0.00	27.7	19.10
N378	004	031	1978	27.8	31.2	0.70	27.7	19.10
N378	004	031	1978	25.1	27.7	1.40	27.7	19.10
N378	004	031	1978	21.1	22.3	5.30	27.7	19.10
N378	004	031	1978	12.1	12.5	11.55	27.7	19.10
N378	004	031	1978	6.8	7.0	15.20	27.7	19.10
N378	004	032	1978	24.8	29.0	0.00	25.0	14.90
N378	004	032	1978	23.4	27.0	0.70	25.0	14.90
N378	004	032	1978	22.0	25.0	1.40	25.0	14.90
N378	004	032	1978	19.0	20.0	3.61	25.0	14.90
N378	004	032	1978	14.2	15.2	6.25	25.0	14.90
N378	004	032	1978	9.1	9.5	9.90	25.0	14.90
N378	004	100	1978	22.1	25.5	0.00	22.1	15.40
N378	004	100	1978	20.8	23.8	0.70	22.1	15.40
N378	004	100	1978	17.8	19.4	3.05	22.1	15.40
N378	004	100	1978	15.8	17.4	4.83	22.1	15.40
N378	004	100	1978	11.7	12.1	8.30	22.1	15.40
N378	004	100	1978	9.2	9.6	10.25	22.1	15.40
N378	004	100	1978	6.9	7.1	11.45	22.1	15.40
N378	004	101	1978	19.4	22.4	0.70	20.3	17.10
N378	004	101	1978	18.3	20.3	1.40	20.3	17.10
N378	004	101	1978	16.2	17.2	3.65	20.3	17.10
N378	004	101	1978	14.2	14.8	5.00	20.3	17.10
N378	004	101	1978	12.2	12.6	7.00	20.3	17.10
N378	004	101	1978	10.0	10.4	9.70	20.3	17.10
N378	004	101	1978	7.6	7.8	11.65	20.3	17.10
N378	009	001	1978	18.6	20.4	0.00	16.6	10.80
N378	009	001	1978	15.5	16.6	1.40	16.6	10.80
N378	009	001	1978	14.0	14.8	3.25	16.6	10.80
N378	009	001	1978	11.0	11.6	5.00	16.6	10.80
N378	009	001	1978	8.7	9.1	6.22	16.6	10.80
N378	009	001	1978	3.7	4.1	10.04	16.6	10.80
N378	009	026	1978	17.3	19.6	0.00	16.2	14.20
N378	009	026	1978	16.2	17.9	0.70	16.2	14.20
N378	009	026	1978	15.2	16.2	1.40	16.2	14.20
N378	009	026	1978	10.9	11.4	6.60	16.2	14.20
N378	009	026	1978	8.3	8.7	8.70	16.2	14.20
N378	009	026	1978	5.8	6.2	10.90	16.2	14.20
N378	009	032	1978	19.9	21.9	0.00	16.7	14.35
N378	009	032	1978	17.5	19.3	0.70	16.7	14.35
N378	009	032	1978	15.2	16.7	1.40	16.7	14.35
N378	009	032	1978	13.3	14.2	3.50	16.7	14.35
N378	009	032	1978	8.7	9.2	8.50	16.7	14.35
N378	009	032	1978	6.3	6.7	10.75	16.7	14.35

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	009	035	1978	20.7	22.9	0.00	19.7	13.95
N378	009	035	1978	18.0	19.7	1.40	19.7	13.95
N378	009	035	1978	15.5	16.6	2.80	19.7	13.95
N378	009	035	1978	13.8	14.7	4.10	19.7	13.95
N378	009	035	1978	11.4	12.2	6.05	19.7	13.95
N378	009	035	1978	6.8	7.5	9.90	19.7	13.95
N378	009	035	1978	4.1	4.7	11.80	19.7	13.95
N378	009	042	1978	21.0	23.2	0.00	20.8	12.05
N378	009	042	1978	20.0	22.0	0.70	20.8	12.05
N378	009	042	1978	16.6	17.9	2.70	20.8	12.05
N378	009	042	1978	13.9	14.9	4.00	20.8	12.05
N378	009	042	1978	12.3	13.3	5.55	20.8	12.05
N378	009	042	1978	9.9	10.8	6.40	20.8	12.05
N378	009	042	1978	7.3	8.0	8.40	20.8	12.05
N378	009	044	1978	19.1	20.8	1.40	20.8	14.23
N378	009	044	1978	17.2	18.3	2.35	20.8	14.23
N378	009	044	1978	14.7	15.8	4.50	20.8	14.23
N378	009	044	1978	12.2	13.3	6.70	20.8	14.23
N378	009	044	1978	10.2	11.0	8.35	20.8	14.23
N378	009	044	1978	7.6	8.3	10.15	20.8	14.23
N378	009	044	1978	4.9	5.5	11.65	20.8	14.23
N378	010	002	1978	27.2	30.0	0.70	27.5	16.20
N378	010	002	1978	24.9	27.5	1.40	27.5	16.20
N378	010	002	1978	21.3	22.5	3.70	27.5	16.20
N378	010	002	1978	16.5	17.3	7.30	27.5	16.20
N378	010	002	1978	11.8	12.4	9.65	27.5	16.20
N378	010	002	1978	7.1	7.5	12.15	27.5	16.20
N378	010	007	1978	29.9	32.0	0.70	26.8	16.50
N378	010	007	1978	24.9	26.8	1.40	26.8	16.50
N378	010	007	1978	20.4	21.3	4.55	26.8	16.50
N378	010	007	1978	15.9	16.7	7.15	26.8	16.50
N378	010	007	1978	11.1	11.8	10.50	26.8	16.50
N378	010	007	1978	6.3	6.7	13.80	26.8	16.50
N378	010	018	1978	15.7	17.5	0.00	16.3	10.45
N378	010	018	1978	15.3	16.9	0.70	16.3	10.45
N378	010	018	1978	12.9	13.9	2.65	16.3	10.45
N378	010	018	1978	8.3	8.8	5.55	16.3	10.45
N378	010	018	1978	5.6	6.0	7.75	16.3	10.45
N378	010	018	1978	3.6	3.8	9.30	16.3	10.45
N378	010	024	1978	17.2	19.5	0.70	16.0	12.40
N378	010	024	1978	14.0	16.0	1.40	16.0	12.40
N378	010	024	1978	12.8	13.5	3.55	16.0	12.40
N378	010	024	1978	10.6	11.0	6.30	16.0	12.40
N378	010	024	1978	8.1	8.5	8.45	16.0	12.40
N378	010	024	1978	5.7	6.1	9.35	16.0	12.40
N378	010	029	1978	27.0	29.4	0.70	27.8	14.25
N378	010	029	1978	25.7	27.8	1.40	27.8	14.25
N378	010	029	1978	21.0	22.1	3.00	27.8	14.25
N378	010	029	1978	17.0	17.8	5.60	27.8	14.25
N378	010	029	1978	11.5	11.9	7.95	27.8	14.25

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	010	029	1978	7.3	7.7	10.75	27.8	14.25
N378	010	036	1978	18.5	20.3	0.00	17.7	11.75
N378	010	036	1978	17.6	19.0	0.70	17.7	11.75
N378	010	036	1978	16.6	17.7	1.40	17.7	11.75
N378	010	036	1978	10.1	10.5	5.85	17.7	11.75
N378	010	036	1978	7.3	7.5	7.80	17.7	11.75
N378	010	036	1978	5.0	5.2	9.55	17.7	11.75
N378	011	011	1978	16.8	19.6	0.00	16.8	15.20
N378	011	011	1978	16.1	18.2	0.70	16.8	15.20
N378	011	011	1978	15.4	16.8	1.40	16.8	15.20
N378	011	011	1978	13.7	14.3	4.45	16.8	15.20
N378	011	011	1978	8.9	9.3	9.30	16.8	15.20
N378	011	011	1978	6.4	6.8	11.85	16.8	15.20
N378	011	014	1978	24.0	26.2	0.70	21.1	14.50
N378	011	014	1978	19.0	21.1	1.40	21.1	14.50
N378	011	014	1978	17.1	18.5	3.30	21.1	14.50
N378	011	014	1978	15.4	16.1	4.65	21.1	14.50
N378	011	014	1978	10.5	11.1	8.75	21.1	14.50
N378	011	014	1978	8.1	8.5	10.55	21.1	14.50
N378	011	014	1978	5.9	6.1	12.20	21.1	14.50
N378	011	026	1978	22.4	24.4	0.70	23.0	16.50
N378	011	026	1978	21.2	23.0	1.40	23.0	16.50
N378	011	026	1978	19.2	20.7	2.45	23.0	16.50
N378	011	026	1978	17.0	17.8	4.10	23.0	16.50
N378	011	026	1978	14.9	15.5	6.30	23.0	16.50
N378	011	026	1978	9.9	10.2	10.10	23.0	16.50
N378	011	026	1978	7.8	8.0	12.00	23.0	16.50
N378	011	026	1978	5.3	5.5	13.90	23.0	16.50
N378	011	028	1978	17.0	18.4	0.00	16.6	14.70
N378	011	028	1978	15.7	16.6	1.40	16.6	14.70
N378	011	028	1978	13.5	14.1	4.00	16.6	14.70
N378	011	028	1978	11.2	11.6	6.80	16.6	14.70
N378	011	028	1978	8.7	9.1	9.05	16.6	14.70
N378	011	028	1978	6.4	6.6	11.45	16.6	14.70
N378	011	040	1978	22.9	25.8	0.00	21.0	14.80
N378	011	040	1978	21.1	23.4	0.70	21.0	14.80
N378	011	040	1978	19.4	21.0	1.40	21.0	14.80
N378	011	040	1978	18.0	19.0	2.70	21.0	14.80
N378	011	040	1978	15.6	16.0	4.90	21.0	14.80
N378	011	040	1978	8.5	8.7	9.90	21.0	14.80
N378	011	040	1978	5.8	6.0	11.75	21.0	14.80
N378	011	042	1978	16.7	19.3	0.00	15.7	11.40
N378	011	042	1978	15.6	17.5	0.70	15.7	11.40
N378	011	042	1978	14.4	15.7	1.40	15.7	11.40
N378	011	042	1978	12.5	13.2	3.10	15.7	11.40
N378	011	042	1978	10.3	10.7	5.00	15.7	11.40
N378	011	042	1978	7.9	8.2	6.60	15.7	11.40
N378	012	006	1978	14.8	16.7	0.00	14.5	12.50
N378	012	006	1978	14.2	15.6	0.70	14.5	12.50
N378	012	006	1978	13.7	14.5	1.40	14.5	12.50

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	012	006	1978	13.1	13.6	2.75	14.5	12.50
N378	012	006	1978	12.1	12.5	4.30	14.5	12.50
N378	012	006	1978	10.1	10.5	6.15	14.5	12.50
N378	012	006	1978	9.3	9.5	7.00	14.5	12.50
N378	012	006	1978	8.3	8.5	7.65	14.5	12.50
N378	012	006	1978	6.5	6.7	9.10	14.5	12.50
N378	012	006	1978	4.9	5.1	10.30	14.5	12.50
N378	012	010	1978	14.0	15.9	0.00	13.3	12.80
N378	012	010	1978	12.6	13.3	1.40	13.3	12.80
N378	012	010	1978	11.9	12.3	2.20	13.3	12.80
N378	012	010	1978	10.9	11.3	3.55	13.3	12.80
N378	012	010	1978	8.9	9.3	5.80	13.3	12.80
N378	012	010	1978	7.9	8.3	6.90	13.3	12.80
N378	012	010	1978	6.9	7.3	7.65	13.3	12.80
N378	012	010	1978	6.1	6.3	8.60	13.3	12.80
N378	012	010	1978	5.0	5.2	9.75	13.3	12.80
N378	012	015	1978	22.9	26.9	0.00	20.1	14.70
N378	012	015	1978	20.2	23.5	0.70	20.1	14.70
N378	012	015	1978	17.4	20.1	1.40	20.1	14.70
N378	012	015	1978	15.6	17.1	2.90	20.1	14.70
N378	012	015	1978	14.2	15.0	4.50	20.1	14.70
N378	012	015	1978	4.9	5.1	12.10	20.1	14.70
N378	012	019	1978	24.1	27.4	0.00	22.0	14.70
N378	012	019	1978	20.4	22.0	1.40	22.0	14.70
N378	012	019	1978	18.9	19.5	3.20	22.0	14.70
N378	012	019	1978	16.5	17.1	5.35	22.0	14.70
N378	012	019	1978	13.9	14.5	7.45	22.0	14.70
N378	012	019	1978	11.6	12.0	8.75	22.0	14.70
N378	012	019	1978	9.1	9.5	10.25	22.0	14.70
N378	012	019	1978	4.3	4.5	12.45	22.0	14.70
N378	012	030	1978	23.6	25.6	0.00	20.2	16.90
N378	012	030	1978	20.9	22.9	0.70	20.2	16.90
N378	012	030	1978	16.2	17.2	3.65	20.2	16.90
N378	012	030	1978	14.0	14.6	6.10	20.2	16.90
N378	012	030	1978	12.0	12.4	8.70	20.2	16.90
N378	012	030	1978	6.8	7.0	12.90	20.2	16.90
N378	012	030	1978	4.8	5.0	14.50	20.2	16.90
N378	012	034	1978	16.0	17.6	0.00	13.8	12.50
N378	012	034	1978	14.6	15.7	0.70	13.8	12.50
N378	012	034	1978	13.1	13.8	1.40	13.8	12.50
N378	012	034	1978	12.3	12.8	2.55	13.8	12.50
N378	012	034	1978	11.4	11.8	3.90	13.8	12.50
N378	012	034	1978	10.6	10.8	5.10	13.8	12.50
N378	012	034	1978	8.6	8.8	7.45	13.8	12.50
N378	012	034	1978	6.4	6.6	9.25	13.8	12.50
N378	012	034	1978	5.7	5.9	9.90	13.8	12.50
N379	001	009	1977	26.5	32.8	0.00	28.4	24.30
N379	001	009	1977	25.4	30.5	0.70	28.4	24.30
N379	001	009	1977	24.1	27.7	2.00	28.4	24.30
N379	001	009	1977	23.4	26.6	3.00	28.4	24.30

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	001	009	1977	21.5	23.4	6.00	28.4	24.30
N379	001	009	1977	20.5	21.7	9.00	28.4	24.30
N379	001	013	1977	34.7	41.1	0.00	37.0	24.80
N379	001	013	1977	33.1	39.0	0.70	37.0	24.80
N379	001	013	1977	31.6	37.0	1.50	37.0	24.80
N379	001	013	1977	30.2	35.1	2.00	37.0	24.80
N379	001	013	1977	27.1	29.7	6.00	37.0	24.80
N379	001	013	1977	25.8	27.1	9.00	37.0	24.80
N379	001	013	1977	18.4	19.2	15.00	37.0	24.80
N379	002	006	1977	28.1	34.9	0.00	31.2	26.00
N379	002	006	1977	27.5	33.0	0.70	31.2	26.00
N379	002	006	1977	26.8	31.2	1.50	31.2	26.00
N379	002	006	1977	27.3	30.3	2.00	31.2	26.00
N379	002	006	1977	22.2	23.3	9.00	31.2	26.00
N379	002	006	1977	19.7	20.4	12.00	31.2	26.00
N379	002	006	1977	18.0	18.5	15.00	31.2	26.00
N379	002	014	1977	35.1	41.3	0.00	35.1	26.00
N379	002	014	1977	33.1	38.1	0.70	35.1	26.00
N379	002	014	1977	30.8	33.9	2.00	35.1	26.00
N379	002	014	1977	30.2	32.9	3.00	35.1	26.00
N379	002	014	1977	29.0	31.0	6.00	35.1	26.00
N379	002	014	1977	25.0	25.8	12.00	35.1	26.00
N379	002	017	1977	34.5	41.3	0.00	35.3	27.70
N379	002	017	1977	30.4	35.3	1.50	35.3	27.70
N379	002	017	1977	31.2	34.7	2.00	35.3	27.70
N379	002	017	1977	28.5	30.7	6.00	35.3	27.70
N379	002	017	1977	26.7	28.0	9.00	35.3	27.70
N379	002	017	1977	23.5	24.5	12.00	35.3	27.70
N379	003	011	1977	29.6	36.1	0.00	31.3	26.10
N379	003	011	1977	29.0	33.6	0.70	31.3	26.10
N379	003	011	1977	28.5	31.3	1.50	31.3	26.10
N379	003	011	1977	26.8	29.0	2.00	31.3	26.10
N379	003	011	1977	26.4	28.4	3.00	31.3	26.10
N379	003	011	1977	23.9	25.5	6.00	31.3	26.10
N379	003	011	1977	22.7	23.4	9.00	31.3	26.10
N379	003	011	1977	18.3	18.9	15.00	31.3	26.10
N379	003	020	1977	38.2	44.3	0.00	38.9	28.60
N379	003	020	1977	36.2	41.5	0.70	38.9	28.60
N379	003	020	1977	33.5	37.5	2.00	38.9	28.60
N379	003	020	1977	32.8	36.1	3.00	38.9	28.60
N379	003	020	1977	30.1	32.3	6.00	38.9	28.60
N379	003	020	1977	25.9	26.7	12.00	38.9	28.60
N379	003	020	1977	23.0	23.7	15.00	38.9	28.60
N379	003	020	1977	19.4	19.9	18.00	38.9	28.60
N379	003	021	1977	35.1	42.8	0.00	37.4	26.30
N379	003	021	1977	31.6	37.4	1.50	37.4	26.30
N379	003	021	1977	30.3	34.1	3.00	37.4	26.30
N379	003	021	1977	28.0	30.0	6.00	37.4	26.30
N379	003	021	1977	27.7	29.0	9.00	37.4	26.30
N379	003	021	1977	23.8	24.7	12.00	37.4	26.30

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	003	021	1977	20.3	21.1	15.00	37.4	26.30
N379	004	011	1977	36.5	42.5	0.00	35.9	26.10
N379	004	011	1977	33.9	39.1	0.70	35.9	26.10
N379	004	011	1977	30.2	34.0	2.00	35.9	26.10
N379	004	011	1977	28.7	29.9	6.00	35.9	26.10
N379	004	011	1977	25.5	26.1	9.00	35.9	26.10
N379	004	011	1977	22.8	23.4	12.00	35.9	26.10
N379	004	011	1977	19.3	19.9	15.00	35.9	26.10
N379	004	011	1977	14.9	15.3	18.00	35.9	26.10
N379	004	026	1977	35.6	40.5	0.70	36.3	27.40
N379	004	026	1977	31.9	36.3	1.50	36.3	27.40
N379	004	026	1977	30.5	34.6	2.00	36.3	27.40
N379	004	026	1977	29.6	32.9	3.00	36.3	27.40
N379	004	026	1977	24.6	25.7	9.00	36.3	27.40
N379	004	026	1977	21.9	22.8	12.00	36.3	27.40
N379	004	029	1977	32.6	38.5	0.00	32.5	26.10
N379	004	029	1977	30.4	35.4	0.70	32.5	26.10
N379	004	029	1977	28.4	32.5	1.50	32.5	26.10
N379	004	029	1977	28.1	31.5	2.00	32.5	26.10
N379	004	029	1977	26.5	27.7	6.00	32.5	26.10
N379	004	029	1977	21.9	22.6	12.00	32.5	26.10
N379	005	001	1977	25.6	31.3	0.00	28.2	23.10
N379	005	001	1977	24.4	29.7	0.70	28.2	23.10
N379	005	001	1977	23.3	28.2	1.50	28.2	23.10
N379	005	001	1977	23.3	27.1	2.00	28.2	23.10
N379	005	001	1977	23.2	26.0	3.00	28.2	23.10
N379	005	001	1977	21.3	22.2	9.00	28.2	23.10
N379	005	008	1977	30.5	38.3	0.00	33.7	24.90
N379	005	008	1977	27.0	32.5	2.00	33.7	24.90
N379	005	008	1977	26.4	31.1	3.00	33.7	24.90
N379	005	008	1977	24.4	27.5	6.00	33.7	24.90
N379	005	008	1977	23.8	25.4	9.00	33.7	24.90
N379	005	008	1977	20.8	21.7	12.00	33.7	24.90
N379	005	008	1977	18.2	19.1	15.00	33.7	24.90
N379	005	013	1977	32.3	38.1	0.70	35.0	25.60
N379	005	013	1977	29.6	35.0	1.50	35.0	25.60
N379	005	013	1977	30.5	34.8	2.00	35.0	25.60
N379	005	013	1977	28.9	32.6	3.00	35.0	25.60
N379	005	013	1977	26.0	27.0	9.00	35.0	25.60
N379	005	013	1977	22.8	23.7	12.00	35.0	25.60
N379	005	013	1977	19.0	19.6	15.00	35.0	25.60
N379	005	013	1977	15.8	16.2	18.00	35.0	25.60
N379	006	012	1977	29.7	33.4	0.70	30.0	20.20
N379	006	012	1977	26.6	30.0	1.50	30.0	20.20
N379	006	012	1977	26.9	29.3	2.00	30.0	20.20
N379	006	012	1977	25.7	27.8	3.00	30.0	20.20
N379	006	012	1977	24.4	26.1	6.00	30.0	20.20
N379	006	012	1977	21.4	22.4	12.00	30.0	20.20
N379	006	013	1977	37.7	44.6	0.00	38.6	23.70
N379	006	013	1977	35.2	41.5	0.70	38.6	23.70

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	006	013	1977	32.9	38.6	1.50	38.6	23.70
N379	006	013	1977	33.1	38.1	2.00	38.6	23.70
N379	006	013	1977	28.9	30.4	6.00	38.6	23.70
N379	006	013	1977	26.2	27.0	9.00	38.6	23.70
N379	006	013	1977	23.6	24.2	12.00	38.6	23.70
N379	006	013	1977	19.6	20.2	15.00	38.6	23.70
N379	006	028	1977	36.4	45.0	0.00	37.8	23.70
N379	006	028	1977	31.8	37.8	1.50	37.8	23.70
N379	006	028	1977	30.3	35.5	2.00	37.8	23.70
N379	006	028	1977	28.8	31.6	3.00	37.8	23.70
N379	006	028	1977	28.5	31.3	6.00	37.8	23.70
N379	006	028	1977	26.8	28.6	9.00	37.8	23.70
N379	006	028	1977	20.4	21.4	15.00	37.8	23.70
N379	006	028	1977	16.9	17.4	18.00	37.8	23.70
N379	007	002	1977	26.6	32.6	0.00	28.5	19.60
N379	007	002	1977	25.3	30.5	0.70	28.5	19.60
N379	007	002	1977	23.1	26.7	2.00	28.5	19.60
N379	007	002	1977	22.7	25.0	3.00	28.5	19.60
N379	007	002	1977	20.4	22.0	6.00	28.5	19.60
N379	007	002	1977	19.5	20.2	9.00	28.5	19.60
N379	007	002	1977	16.6	17.1	12.00	28.5	19.60
N379	007	008	1977	33.8	38.4	0.00	35.1	25.40
N379	007	008	1977	32.6	36.7	0.70	35.1	25.40
N379	007	008	1977	31.5	35.1	1.50	35.1	25.40
N379	007	008	1977	30.5	33.5	2.00	35.1	25.40
N379	007	008	1977	30.1	32.2	3.00	35.1	25.40
N379	007	008	1977	22.4	23.5	12.00	35.1	25.40
N379	007	008	1977	18.9	19.9	15.00	35.1	25.40
N379	007	008	1977	13.9	14.6	18.00	35.1	25.40
N379	007	015	1977	29.2	35.7	0.00	30.7	24.00
N379	007	015	1977	25.8	29.6	2.00	30.7	24.00
N379	007	015	1977	26.2	28.5	3.00	30.7	24.00
N379	007	015	1977	22.4	24.4	6.00	30.7	24.00
N379	007	015	1977	20.9	21.8	9.00	30.7	24.00
N379	007	015	1977	18.4	19.1	12.00	30.7	24.00
N379	007	015	1977	16.1	16.5	15.00	30.7	24.00
N379	008	007	1977	34.1	39.1	0.70	36.7	29.20
N379	008	007	1977	32.1	36.7	1.50	36.7	29.20
N379	008	007	1977	31.3	35.2	2.00	36.7	29.20
N379	008	007	1977	31.0	34.3	3.00	36.7	29.20
N379	008	007	1977	27.4	29.7	6.00	36.7	29.20
N379	008	007	1977	27.1	28.0	9.00	36.7	29.20
N379	008	018	1977	31.8	36.9	0.00	33.0	26.30
N379	008	018	1977	30.3	34.9	0.70	33.0	26.30
N379	008	018	1977	29.6	32.8	2.00	33.0	26.30
N379	008	018	1977	25.9	27.7	6.00	33.0	26.30
N379	008	018	1977	24.1	25.2	9.00	33.0	26.30
N379	008	018	1977	21.2	22.1	12.00	33.0	26.30
N379	008	018	1977	18.0	18.7	15.00	33.0	26.30
N379	008	023	1977	33.1	38.0	0.70	35.3	24.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	008	023	1977	30.8	35.3	1.50	35.3	24.00
N379	008	023	1977	30.1	33.8	2.00	35.3	24.00
N379	008	023	1977	29.9	33.6	3.00	35.3	24.00
N379	008	023	1977	28.0	30.5	6.00	35.3	24.00
N379	008	023	1977	26.2	27.3	9.00	35.3	24.00
N379	008	023	1977	18.5	19.3	15.00	35.3	24.00
N379	009	001	1977	30.6	37.8	0.00	33.7	26.80
N379	009	001	1977	29.2	33.6	2.00	33.7	26.80
N379	009	001	1977	29.3	32.7	3.00	33.7	26.80
N379	009	001	1977	27.1	29.1	6.00	33.7	26.80
N379	009	001	1977	26.0	27.3	9.00	33.7	26.80
N379	009	001	1977	23.9	25.0	12.00	33.7	26.80
N379	009	001	1977	21.3	22.0	15.00	33.7	26.80
N379	009	003	1977	31.1	36.7	0.00	32.1	27.40
N379	009	003	1977	29.2	34.3	0.70	32.1	27.40
N379	009	003	1977	26.4	30.0	3.00	32.1	27.40
N379	009	003	1977	23.5	25.7	6.00	32.1	27.40
N379	009	003	1977	22.4	23.6	9.00	32.1	27.40
N379	009	003	1977	20.6	21.5	12.00	32.1	27.40
N379	009	004	1977	37.4	43.7	0.00	38.1	26.70
N379	009	004	1977	33.2	38.1	1.50	38.1	26.70
N379	009	004	1977	30.9	34.6	2.00	38.1	26.70
N379	009	004	1977	27.8	29.7	6.00	38.1	26.70
N379	009	004	1977	26.2	27.1	9.00	38.1	26.70
N379	009	004	1977	23.6	24.3	12.00	38.1	26.70
N379	009	004	1977	19.4	20.1	15.00	38.1	26.70
N379	010	012	1977	32.4	38.5	0.00	34.8	27.70
N379	010	012	1977	31.1	36.6	0.70	34.8	27.70
N379	010	012	1977	30.0	34.8	1.50	34.8	27.70
N379	010	012	1977	29.3	32.4	3.00	34.8	27.70
N379	010	012	1977	24.1	25.3	9.00	34.8	27.70
N379	010	012	1977	21.8	22.6	12.00	34.8	27.70
N379	010	012	1977	18.2	18.7	15.00	34.8	27.70
N379	010	014	1977	29.4	35.3	0.00	30.3	22.80
N379	010	014	1977	27.9	32.7	0.70	30.3	22.80
N379	010	014	1977	25.6	28.0	3.00	30.3	22.80
N379	010	014	1977	22.4	24.1	6.00	30.3	22.80
N379	010	014	1977	20.9	21.6	9.00	30.3	22.80
N379	010	014	1977	19.0	19.6	12.00	30.3	22.80
N379	010	014	1977	16.0	16.4	15.00	30.3	22.80
N379	010	031	1977	35.3	40.2	0.00	35.6	25.00
N379	010	031	1977	33.4	37.8	0.70	35.6	25.00
N379	010	031	1977	31.6	35.6	1.50	35.6	25.00
N379	010	031	1977	30.9	34.8	2.00	35.6	25.00
N379	010	031	1977	27.1	29.4	6.00	35.6	25.00
N379	010	031	1977	23.2	24.0	12.00	35.6	25.00
N379	010	031	1977	18.4	19.2	15.00	35.6	25.00
N379	011	001	1977	38.9	44.8	0.70	42.6	28.10
N379	011	001	1977	37.1	42.6	1.50	42.6	28.10
N379	011	001	1977	35.2	39.9	2.00	42.6	28.10

Appendix 7. Sectional measurement data for Golden Downs. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	011	001	1977	34.6	38.5	3.00	42.6	28.10
N379	011	001	1977	28.2	29.5	9.00	42.6	28.10
N379	011	001	1977	24.5	25.5	12.00	42.6	28.10
N379	011	001	1977	20.3	21.1	15.00	42.6	28.10
N379	011	001	1977	18.4	19.0	18.00	42.6	28.10
N379	011	014	1977	30.3	36.2	0.00	31.0	28.50
N379	011	014	1977	28.7	33.5	0.70	31.0	28.50
N379	011	014	1977	26.9	30.2	2.00	31.0	28.50
N379	011	014	1977	26.2	28.7	3.00	31.0	28.50
N379	011	014	1977	24.0	25.8	6.00	31.0	28.50
N379	011	014	1977	19.2	20.0	12.00	31.0	28.50
N379	011	014	1977	16.1	16.8	15.00	31.0	28.50
N379	011	019	1977	36.9	43.7	0.70	41.6	24.70
N379	011	019	1977	35.5	41.6	1.50	41.6	24.70
N379	011	019	1977	34.7	39.4	2.00	41.6	24.70
N379	011	019	1977	33.9	38.0	3.00	41.6	24.70
N379	011	019	1977	32.1	35.3	6.00	41.6	24.70
N379	011	019	1977	29.7	31.5	9.00	41.6	24.70
N379	011	019	1977	26.2	27.4	12.00	41.6	24.70
N379	011	019	1977	23.4	24.3	15.00	41.6	24.70
N379	011	019	1977	13.6	14.3	21.00	41.6	24.70
N379	012	009	1977	29.9	34.9	0.00	29.5	21.10
N379	012	009	1977	25.4	29.5	1.50	29.5	21.10
N379	012	009	1977	24.4	27.6	3.00	29.5	21.10
N379	012	009	1977	22.2	23.9	6.00	29.5	21.10
N379	012	009	1977	20.1	21.2	9.00	29.5	21.10
N379	012	009	1977	17.2	18.0	12.00	29.5	21.10
N379	012	009	1977	13.4	14.0	15.00	29.5	21.10
N379	012	018	1977	30.0	35.5	0.70	33.0	25.90
N379	012	018	1977	28.1	33.0	1.50	33.0	25.90
N379	012	018	1977	27.6	32.3	2.00	33.0	25.90
N379	012	018	1977	27.7	31.5	3.00	33.0	25.90
N379	012	018	1977	23.7	26.3	6.00	33.0	25.90
N379	012	018	1977	22.8	24.1	9.00	33.0	25.90
N379	012	018	1977	19.8	20.7	12.00	33.0	25.90
N379	012	018	1977	12.5	13.2	18.00	33.0	25.90
N379	012	019	1977	29.9	36.5	0.00	33.4	27.50
N379	012	019	1977	27.6	31.8	2.00	33.4	27.50
N379	012	019	1977	26.6	30.0	3.00	33.4	27.50
N379	012	019	1977	24.4	26.9	6.00	33.4	27.50
N379	012	019	1977	22.9	24.0	9.00	33.4	27.50
N379	012	019	1977	19.9	20.8	12.00	33.4	27.50
N379	012	019	1977	18.0	18.7	15.00	33.4	27.50
N379	001	013	1978	35.7	42.4	0.00	38.7	26.00
N379	001	013	1978	34.4	40.5	0.70	38.7	26.00
N379	001	013	1978	33.0	38.7	1.50	38.7	26.00
N379	001	013	1978	28.7	31.2	6.00	38.7	26.00
N379	001	013	1978	27.0	29.3	9.00	38.7	26.00
N379	001	013	1978	23.4	24.8	12.00	38.7	26.00
N379	001	029	1978	34.3	41.2	0.00	34.6	24.30

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	001	029	1978	32.6	37.8	0.70	34.6	24.30
N379	001	029	1978	31.0	34.6	1.50	34.6	24.30
N379	001	029	1978	31.0	34.0	2.00	34.6	24.30
N379	001	029	1978	28.2	29.8	6.00	34.6	24.30
N379	001	029	1978	22.3	23.8	12.00	34.6	24.30
N379	001	029	1978	18.4	19.8	15.00	34.6	24.30
N379	001	030	1978	40.7	47.3	0.70	44.2	27.80
N379	001	030	1978	38.1	43.0	2.00	44.2	27.80
N379	001	030	1978	37.8	41.6	3.00	44.2	27.80
N379	001	030	1978	35.3	37.8	6.00	44.2	27.80
N379	001	030	1978	32.2	34.0	9.00	44.2	27.80
N379	001	030	1978	27.9	29.5	12.00	44.2	27.80
N379	001	030	1978	24.6	26.0	15.00	44.2	27.80
N379	001	030	1978	19.4	20.7	18.00	44.2	27.80
N379	002	006	1978	30.5	36.7	0.00	31.7	26.70
N379	002	006	1978	28.9	34.1	0.70	31.7	26.70
N379	002	006	1978	27.4	31.7	1.50	31.7	26.70
N379	002	006	1978	28.1	31.4	2.00	31.7	26.70
N379	002	006	1978	24.8	26.0	6.00	31.7	26.70
N379	002	006	1978	23.3	24.3	9.00	31.7	26.70
N379	002	006	1978	20.8	21.7	12.00	31.7	26.70
N379	002	007	1978	36.6	41.9	0.00	36.9	28.80
N379	002	007	1978	33.9	39.3	0.70	36.9	28.80
N379	002	007	1978	31.6	35.1	3.00	36.9	28.80
N379	002	007	1978	28.9	31.5	6.00	36.9	28.80
N379	002	007	1978	27.2	29.0	9.00	36.9	28.80
N379	002	007	1978	24.2	26.1	12.00	36.9	28.80
N379	002	007	1978	21.9	23.6	15.00	36.9	28.80
N379	002	014	1978	35.8	42.8	0.00	36.4	25.50
N379	002	014	1978	34.1	39.5	0.70	36.4	25.50
N379	002	014	1978	31.5	35.2	2.00	36.4	25.50
N379	002	014	1978	31.4	33.5	6.00	36.4	25.50
N379	002	014	1978	27.5	29.0	9.00	36.4	25.50
N379	002	014	1978	25.7	27.3	12.00	36.4	25.50
N379	002	017	1978	32.9	38.4	0.70	35.6	28.60
N379	002	017	1978	31.0	35.6	1.50	35.6	28.60
N379	002	017	1978	30.0	33.3	3.00	35.6	28.60
N379	002	017	1978	30.1	32.0	6.00	35.6	28.60
N379	002	017	1978	27.9	29.5	9.00	35.6	28.60
N379	002	017	1978	24.5	26.2	12.00	35.6	28.60
N379	003	004	1978	36.5	43.4	0.00	37.4	26.90
N379	003	004	1978	34.8	40.3	0.70	37.4	26.90
N379	003	004	1978	33.2	37.4	1.50	37.4	26.90
N379	003	004	1978	33.8	36.5	2.00	37.4	26.90
N379	003	004	1978	28.8	30.8	6.00	37.4	26.90
N379	003	004	1978	27.9	29.4	9.00	37.4	26.90
N379	003	004	1978	21.0	22.0	15.00	37.4	26.90
N379	003	005	1978	31.8	35.7	0.00	30.5	24.70
N379	003	005	1978	29.7	33.0	0.70	30.5	24.70
N379	003	005	1978	27.7	30.5	1.50	30.5	24.70

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	003	005	1978	27.4	29.6	2.00	30.5	24.70
N379	003	005	1978	25.9	27.8	3.00	30.5	24.70
N379	003	005	1978	22.7	23.9	9.00	30.5	24.70
N379	003	005	1978	20.6	21.6	12.00	30.5	24.70
N379	003	011	1978	34.1	39.6	0.00	31.5	27.10
N379	003	011	1978	31.0	35.4	0.70	31.5	27.10
N379	003	011	1978	26.6	29.1	2.00	31.5	27.10
N379	003	011	1978	27.0	28.2	3.00	31.5	27.10
N379	003	011	1978	24.4	25.4	6.00	31.5	27.10
N379	003	011	1978	23.2	23.8	9.00	31.5	27.10
N379	003	011	1978	19.0	19.4	15.00	31.5	27.10
N379	003	012	1978	33.9	41.5	0.00	33.8	27.90
N379	003	012	1978	31.4	37.5	0.70	33.8	27.90
N379	003	012	1978	28.9	33.8	1.50	33.8	27.90
N379	003	012	1978	28.1	32.3	2.00	33.8	27.90
N379	003	012	1978	28.3	32.1	3.00	33.8	27.90
N379	003	012	1978	26.3	28.5	6.00	33.8	27.90
N379	003	012	1978	24.2	25.8	9.00	33.8	27.90
N379	003	016	1978	35.1	39.6	0.70	35.8	27.10
N379	003	016	1978	31.8	35.8	1.50	35.8	27.10
N379	003	016	1978	29.4	32.4	3.00	35.8	27.10
N379	003	016	1978	28.1	30.3	6.00	35.8	27.10
N379	003	016	1978	25.5	27.2	9.00	35.8	27.10
N379	003	016	1978	24.6	26.4	12.00	35.8	27.10
N379	003	021	1978	35.9	43.5	0.00	37.9	28.20
N379	003	021	1978	35.0	40.6	0.70	37.9	28.20
N379	003	021	1978	34.1	37.9	1.50	37.9	28.20
N379	003	021	1978	33.0	36.5	2.00	37.9	28.20
N379	003	021	1978	31.9	34.8	3.00	37.9	28.20
N379	003	021	1978	25.3	26.4	12.00	37.9	28.20
N379	004	006	1978	35.6	41.6	0.00	35.2	26.60
N379	004	006	1978	33.4	38.3	0.70	35.2	26.60
N379	004	006	1978	31.4	35.2	1.50	35.2	26.60
N379	004	006	1978	31.0	34.6	2.00	35.2	26.60
N379	004	006	1978	30.7	33.4	3.00	35.2	26.60
N379	004	006	1978	27.2	28.8	6.00	35.2	26.60
N379	004	006	1978	19.8	20.8	15.00	35.2	26.60
N379	004	011	1978	38.1	44.1	0.00	37.3	26.40
N379	004	011	1978	34.9	40.6	0.70	37.3	26.40
N379	004	011	1978	30.7	35.1	2.00	37.3	26.40
N379	004	011	1978	30.0	32.9	3.00	37.3	26.40
N379	004	011	1978	29.3	31.5	6.00	37.3	26.40
N379	004	011	1978	23.6	25.1	12.00	37.3	26.40
N379	004	011	1978	20.1	21.3	15.00	37.3	26.40
N379	004	026	1978	36.4	44.6	0.00	38.0	28.40
N379	004	026	1978	32.5	36.3	2.00	38.0	28.40
N379	004	026	1978	31.1	34.4	3.00	38.0	28.40
N379	004	026	1978	29.5	31.7	6.00	38.0	28.40
N379	004	026	1978	26.3	27.4	9.00	38.0	28.40
N379	004	026	1978	23.4	24.3	12.00	38.0	28.40

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	004	026	1978	19.6	20.1	15.00	38.0	28.40
N379	004	029	1978	34.3	39.1	0.00	33.5	27.90
N379	004	029	1978	32.2	36.2	0.70	33.5	27.90
N379	004	029	1978	30.3	33.5	1.50	33.5	27.90
N379	004	029	1978	29.5	31.5	3.00	33.5	27.90
N379	004	029	1978	27.9	29.0	6.00	33.5	27.90
N379	004	029	1978	25.9	26.7	9.00	33.5	27.90
N379	005	001	1978	25.7	30.9	0.70	30.5	22.30
N379	005	001	1978	26.0	30.5	1.50	30.5	22.30
N379	005	001	1978	24.3	28.1	2.00	30.5	22.30
N379	005	001	1978	22.6	24.7	6.00	30.5	22.30
N379	005	001	1978	21.4	23.3	9.00	30.5	22.30
N379	005	001	1978	19.0	20.5	12.00	30.5	22.30
N379	005	013	1978	37.4	42.1	0.00	35.7	26.80
N379	005	013	1978	34.7	38.8	0.70	35.7	26.80
N379	005	013	1978	32.3	35.7	1.50	35.7	26.80
N379	005	013	1978	32.6	35.5	2.00	35.7	26.80
N379	005	013	1978	31.2	33.6	3.00	35.7	26.80
N379	005	013	1978	28.7	31.1	6.00	35.7	26.80
N379	005	013	1978	23.6	25.1	12.00	35.7	26.80
N379	005	023	1978	37.2	45.6	0.00	40.8	25.40
N379	005	023	1978	35.6	39.4	2.00	40.8	25.40
N379	005	023	1978	34.3	37.6	3.00	40.8	25.40
N379	005	023	1978	31.4	33.9	6.00	40.8	25.40
N379	005	023	1978	27.2	29.3	9.00	40.8	25.40
N379	005	023	1978	24.2	25.5	12.00	40.8	25.40
N379	005	023	1978	20.9	22.0	15.00	40.8	25.40
N379	006	001	1978	28.9	34.8	0.00	32.7	26.50
N379	006	001	1978	28.4	33.7	0.70	32.7	26.50
N379	006	001	1978	27.9	32.7	1.50	32.7	26.50
N379	006	001	1978	27.0	31.2	2.00	32.7	26.50
N379	006	001	1978	24.9	26.8	6.00	32.7	26.50
N379	006	001	1978	19.9	21.4	12.00	32.7	26.50
N379	006	001	1978	16.5	17.5	15.00	32.7	26.50
N379	006	012	1978	30.1	36.0	0.00	31.2	27.80
N379	006	012	1978	29.0	33.5	0.70	31.2	27.80
N379	006	012	1978	27.9	31.2	1.50	31.2	27.80
N379	006	012	1978	26.8	29.9	2.00	31.2	27.80
N379	006	012	1978	26.5	29.1	3.00	31.2	27.80
N379	006	012	1978	25.3	26.8	6.00	31.2	27.80
N379	006	012	1978	23.8	24.9	9.00	31.2	27.80
N379	006	012	1978	12.0	12.7	18.00	31.2	27.80
N379	006	013	1978	36.1	46.4	0.00	40.4	25.20
N379	006	013	1978	35.2	43.3	0.70	40.4	25.20
N379	006	013	1978	34.3	40.4	1.50	40.4	25.20
N379	006	013	1978	30.0	32.1	6.00	40.4	25.20
N379	006	013	1978	27.3	28.7	9.00	40.4	25.20
N379	006	013	1978	24.7	26.0	12.00	40.4	25.20
N379	006	013	1978	20.8	22.0	15.00	40.4	25.20
N379	006	013	1978	16.7	17.7	18.00	40.4	25.20

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	006	013	1978	12.5	13.4	21.00	40.4	25.20
N379	006	028	1978	38.8	46.6	0.00	38.7	29.60
N379	006	028	1978	35.5	42.5	0.70	38.7	29.60
N379	006	028	1978	32.3	38.7	1.50	38.7	29.60
N379	006	028	1978	31.3	37.1	2.00	38.7	29.60
N379	006	028	1978	27.7	30.1	9.00	38.7	29.60
N379	006	028	1978	24.6	26.6	12.00	38.7	29.60
N379	006	028	1978	21.5	23.2	15.00	38.7	29.60
N379	007	001	1978	31.8	40.4	0.00	35.0	29.70
N379	007	001	1978	29.1	35.0	1.50	35.0	29.70
N379	007	001	1978	29.0	33.8	2.00	35.0	29.70
N379	007	001	1978	28.1	31.9	3.00	35.0	29.70
N379	007	001	1978	27.1	28.5	9.00	35.0	29.70
N379	007	001	1978	22.3	23.6	12.00	35.0	29.70
N379	007	001	1978	19.7	20.9	15.00	35.0	29.70
N379	007	008	1978	33.4	37.2	0.00	35.3	27.30
N379	007	008	1978	32.8	36.2	0.70	35.3	27.30
N379	007	008	1978	32.2	35.3	1.50	35.3	27.30
N379	007	008	1978	29.6	32.2	3.00	35.3	27.30
N379	007	008	1978	28.8	30.7	6.00	35.3	27.30
N379	007	008	1978	26.5	28.5	9.00	35.3	27.30
N379	007	008	1978	23.6	25.0	12.00	35.3	27.30
N379	007	008	1978	20.3	21.7	15.00	35.3	27.30
N379	007	008	1978	10.2	11.0	21.00	35.3	27.30
N379	007	009	1978	28.4	34.1	0.00	29.5	25.00
N379	007	009	1978	26.6	31.7	0.70	29.5	25.00
N379	007	009	1978	25.0	29.5	1.50	29.5	25.00
N379	007	009	1978	24.8	28.7	2.00	29.5	25.00
N379	007	009	1978	22.5	24.0	6.00	29.5	25.00
N379	007	009	1978	21.4	22.7	9.00	29.5	25.00
N379	007	009	1978	19.0	20.1	12.00	29.5	25.00
N379	007	015	1978	28.9	35.9	0.00	30.7	27.10
N379	007	015	1978	27.9	33.2	0.70	30.7	27.10
N379	007	015	1978	27.1	30.7	1.50	30.7	27.10
N379	007	015	1978	26.0	28.7	3.00	30.7	27.10
N379	007	015	1978	24.1	25.6	6.00	30.7	27.10
N379	007	015	1978	22.1	23.2	9.00	30.7	27.10
N379	007	022	1978	35.5	40.5	1.50	40.5	29.20
N379	007	022	1978	34.3	38.7	2.00	40.5	29.20
N379	007	022	1978	33.8	36.9	3.00	40.5	29.20
N379	007	022	1978	31.4	33.3	6.00	40.5	29.20
N379	007	022	1978	28.5	30.0	9.00	40.5	29.20
N379	007	022	1978	26.8	28.3	12.00	40.5	29.20
N379	007	022	1978	21.5	22.5	15.00	40.5	29.20
N379	007	023	1978	34.2	42.7	0.00	37.7	27.80
N379	007	023	1978	33.3	40.1	0.70	37.7	27.80
N379	007	023	1978	31.8	36.6	2.00	37.7	27.80
N379	007	023	1978	30.7	34.7	3.00	37.7	27.80
N379	007	023	1978	29.4	32.0	6.00	37.7	27.80
N379	007	023	1978	25.9	27.7	9.00	37.7	27.80

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	007	023	1978	24.0	25.4	12.00	37.7	27.80
N379	007	026	1978	38.6	45.6	0.00	41.0	26.70
N379	007	026	1978	37.2	43.2	0.70	41.0	26.70
N379	007	026	1978	36.0	41.0	1.50	41.0	26.70
N379	007	026	1978	35.9	40.2	2.00	41.0	26.70
N379	007	026	1978	32.6	34.9	6.00	41.0	26.70
N379	007	026	1978	26.1	27.6	12.00	41.0	26.70
N379	007	026	1978	21.3	22.3	15.00	41.0	26.70
N379	008	003	1978	37.6	44.8	0.00	37.3	29.90
N379	008	003	1978	32.9	36.8	2.00	37.3	29.90
N379	008	003	1978	31.7	34.6	3.00	37.3	29.90
N379	008	003	1978	29.4	30.9	6.00	37.3	29.90
N379	008	003	1978	28.2	29.5	9.00	37.3	29.90
N379	008	003	1978	25.0	26.1	12.00	37.3	29.90
N379	008	003	1978	22.5	23.5	15.00	37.3	29.90
N379	008	012	1978	38.0	42.3	0.70	38.8	25.90
N379	008	012	1978	35.3	38.8	1.50	38.8	25.90
N379	008	012	1978	34.8	37.8	2.00	38.8	25.90
N379	008	012	1978	34.0	36.4	3.00	38.8	25.90
N379	008	012	1978	28.5	30.0	9.00	38.8	25.90
N379	008	012	1978	24.1	25.2	12.00	38.8	25.90
N379	008	012	1978	19.7	20.7	15.00	38.8	25.90
N379	008	018	1978	34.0	40.8	0.00	35.2	27.90
N379	008	018	1978	32.9	37.9	0.70	35.2	27.90
N379	008	018	1978	31.9	35.2	1.50	35.2	27.90
N379	008	018	1978	31.1	33.9	2.00	35.2	27.90
N379	008	018	1978	31.2	33.6	3.00	35.2	27.90
N379	008	018	1978	24.5	25.8	12.00	35.2	27.90
N379	008	023	1978	30.2	35.8	0.70	33.0	24.50
N379	008	023	1978	28.4	33.0	1.50	33.0	24.50
N379	008	023	1978	28.3	32.2	2.00	33.0	24.50
N379	008	023	1978	28.8	31.8	3.00	33.0	24.50
N379	008	023	1978	25.9	27.6	6.00	33.0	24.50
N379	008	023	1978	19.8	20.8	12.00	33.0	24.50
N379	008	023	1978	16.5	17.3	15.00	33.0	24.50
N379	009	001	1978	31.4	36.1	0.70	33.9	28.30
N379	009	001	1978	29.8	33.7	2.00	33.9	28.30
N379	009	001	1978	29.4	32.7	3.00	33.9	28.30
N379	009	001	1978	27.8	30.0	6.00	33.9	28.30
N379	009	001	1978	26.8	28.5	9.00	33.9	28.30
N379	009	001	1978	25.0	26.4	12.00	33.9	28.30
N379	009	001	1978	22.1	23.2	15.00	33.9	28.30
N379	009	003	1978	33.1	40.4	0.00	33.2	28.70
N379	009	003	1978	30.9	36.7	0.70	33.2	28.70
N379	009	003	1978	28.8	33.2	1.50	33.2	28.70
N379	009	003	1978	28.5	31.6	3.00	33.2	28.70
N379	009	003	1978	23.5	25.2	9.00	33.2	28.70
N379	009	003	1978	19.2	20.4	12.00	33.2	28.70
N379	009	004	1978	35.7	41.8	0.70	39.0	27.00
N379	009	004	1978	33.8	39.0	1.50	39.0	27.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	009	004	1978	31.8	35.9	2.00	39.0	27.00
N379	009	004	1978	29.2	32.0	3.00	39.0	27.00
N379	009	004	1978	29.1	30.7	6.00	39.0	27.00
N379	009	004	1978	24.4	25.7	12.00	39.0	27.00
N379	009	004	1978	20.8	21.8	15.00	39.0	27.00
N379	009	035	1978	34.3	40.9	0.00	35.7	29.00
N379	009	035	1978	31.7	35.7	1.50	35.7	29.00
N379	009	035	1978	31.4	35.1	2.00	35.7	29.00
N379	009	035	1978	28.5	30.6	6.00	35.7	29.00
N379	009	035	1978	25.3	26.9	9.00	35.7	29.00
N379	009	035	1978	23.6	25.1	12.00	35.7	29.00
N379	010	001	1978	34.8	40.5	0.70	38.4	25.70
N379	010	001	1978	33.7	38.4	1.50	38.4	25.70
N379	010	001	1978	33.5	37.4	2.00	38.4	25.70
N379	010	001	1978	33.0	36.5	3.00	38.4	25.70
N379	010	001	1978	29.2	31.0	6.00	38.4	25.70
N379	010	001	1978	24.1	25.8	12.00	38.4	25.70
N379	010	001	1978	20.6	21.9	15.00	38.4	25.70
N379	010	012	1978	32.7	38.1	0.70	35.3	28.80
N379	010	012	1978	31.3	35.3	1.50	35.3	28.80
N379	010	012	1978	30.3	34.2	2.00	35.3	28.80
N379	010	012	1978	30.4	33.6	3.00	35.3	28.80
N379	010	012	1978	25.0	26.7	9.00	35.3	28.80
N379	010	012	1978	22.9	24.3	12.00	35.3	28.80
N379	010	012	1978	19.4	20.5	15.00	35.3	28.80
N379	010	014	1978	32.3	37.2	0.00	31.0	23.70
N379	010	014	1978	27.2	31.0	1.50	31.0	23.70
N379	010	014	1978	26.2	29.0	3.00	31.0	23.70
N379	010	014	1978	23.7	25.2	6.00	31.0	23.70
N379	010	014	1978	21.7	22.6	9.00	31.0	23.70
N379	010	014	1978	20.0	20.8	12.00	31.0	23.70
N379	010	014	1978	16.1	16.9	15.00	31.0	23.70
N379	010	031	1978	36.8	42.1	0.00	36.3	27.20
N379	010	031	1978	34.5	39.1	0.70	36.3	27.20
N379	010	031	1978	31.7	34.5	3.00	36.3	27.20
N379	010	031	1978	28.5	30.7	6.00	36.3	27.20
N379	010	031	1978	26.2	27.8	9.00	36.3	27.20
N379	010	031	1978	24.4	25.8	12.00	36.3	27.20
N379	010	031	1978	19.8	21.0	15.00	36.3	27.20
N379	011	001	1978	41.5	47.6	0.00	43.5	29.80
N379	011	001	1978	40.2	45.5	0.70	43.5	29.80
N379	011	001	1978	39.0	43.5	1.50	43.5	29.80
N379	011	001	1978	33.6	35.8	6.00	43.5	29.80
N379	011	001	1978	29.7	31.5	9.00	43.5	29.80
N379	011	001	1978	26.1	27.4	12.00	43.5	29.80
N379	011	001	1978	21.5	22.8	15.00	43.5	29.80
N379	011	004	1978	31.6	37.2	0.00	32.6	26.00
N379	011	004	1978	28.4	32.6	1.50	32.6	26.00
N379	011	004	1978	27.7	31.3	2.00	32.6	26.00
N379	011	004	1978	27.4	30.2	3.00	32.6	26.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	011	004	1978	22.9	24.4	9.00	32.6	26.00
N379	011	004	1978	20.1	21.4	12.00	32.6	26.00
N379	011	004	1978	17.5	18.4	15.00	32.6	26.00
N379	011	006	1978	36.4	44.1	0.00	38.5	28.10
N379	011	006	1978	35.2	41.2	0.70	38.5	28.10
N379	011	006	1978	34.1	38.5	1.50	38.5	28.10
N379	011	006	1978	32.9	35.9	3.00	38.5	28.10
N379	011	006	1978	31.1	32.5	6.00	38.5	28.10
N379	011	006	1978	28.4	29.8	9.00	38.5	28.10
N379	011	006	1978	22.4	23.4	15.00	38.5	28.10
N379	011	019	1978	41.3	48.4	0.00	43.0	30.00
N379	011	019	1978	39.3	45.6	0.70	43.0	30.00
N379	011	019	1978	37.5	43.0	1.50	43.0	30.00
N379	011	019	1978	36.0	41.0	2.00	43.0	30.00
N379	011	019	1978	33.5	37.1	6.00	43.0	30.00
N379	011	019	1978	28.0	29.5	12.00	43.0	30.00
N379	011	019	1978	25.4	26.7	15.00	43.0	30.00
N379	011	019	1978	21.1	22.0	18.00	43.0	30.00
N379	011	019	1978	17.1	18.3	21.00	43.0	30.00
N379	012	005	1978	31.0	38.3	0.00	32.3	23.60
N379	012	005	1978	27.5	32.3	1.50	32.3	23.60
N379	012	005	1978	28.1	32.1	2.00	32.3	23.60
N379	012	005	1978	26.4	29.4	3.00	32.3	23.60
N379	012	005	1978	21.3	22.6	9.00	32.3	23.60
N379	012	005	1978	18.3	19.6	12.00	32.3	23.60
N379	012	005	1978	15.0	16.2	15.00	32.3	23.60
N379	012	009	1978	30.0	35.7	0.00	30.1	22.60
N379	012	009	1978	27.9	32.8	0.70	30.1	22.60
N379	012	009	1978	26.1	29.6	2.00	30.1	22.60
N379	012	009	1978	26.4	28.7	3.00	30.1	22.60
N379	012	009	1978	23.4	24.9	6.00	30.1	22.60
N379	012	009	1978	18.2	19.4	12.00	30.1	22.60
N379	012	009	1978	14.7	15.7	15.00	30.1	22.60
N379	012	018	1978	33.9	40.5	0.00	34.1	26.70
N379	012	018	1978	31.3	37.2	0.70	34.1	26.70
N379	012	018	1978	28.9	34.1	1.50	34.1	26.70
N379	012	018	1978	24.9	27.8	6.00	34.1	26.70
N379	012	018	1978	23.6	25.5	9.00	34.1	26.70
N379	012	018	1978	20.9	22.2	12.00	34.1	26.70
N379	012	019	1978	34.4	39.2	0.00	34.0	28.10
N379	012	019	1978	29.0	34.0	1.50	34.0	28.10
N379	012	019	1978	29.2	33.2	2.00	34.0	28.10
N379	012	019	1978	27.9	31.3	3.00	34.0	28.10
N379	012	019	1978	23.5	25.2	9.00	34.0	28.10
N379	012	019	1978	20.6	22.1	12.00	34.0	28.10

Appendix 7. Sectional measurement data for Golden Downs.
(20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	001	001	1973	13.0	14.7	0.00	12.7	12.94
N262	001	001	1973	7.1	7.6	7.07	12.7	12.94
N262	001	016	1973	16.0	18.0	1.40	18.0	13.86
N262	001	016	1973	9.6	10.4	8.23	18.0	13.86
N262	001	021	1973	5.8	6.6	12.95	22.4	16.66
N262	001	021	1973	4.1	4.6	14.63	22.4	16.66
N262	001	025	1973	10.4	11.4	5.88	14.0	15.23
N262	001	025	1973	2.2	2.5	14.54	14.0	15.23
N262	001	027	1973	9.2	10.2	10.49	22.9	16.14
N262	001	027	1973	4.3	5.1	13.72	22.9	16.14
N262	001	042	1973	22.2	24.9	1.40	24.9	17.76
N262	001	042	1973	6.3	7.1	14.33	24.9	17.76
N262	001	045	1973	14.2	15.2	6.89	25.4	16.97
N262	001	045	1973	4.3	5.1	13.90	25.4	16.97
N262	001	048	1973	13.2	14.2	2.77	16.8	14.25
N262	001	048	1973	3.6	4.1	12.37	16.8	14.25
N262	001	059	1973	4.6	5.1	11.43	14.0	14.02
N262	001	059	1973	3.3	3.8	12.31	14.0	14.02
N262	002	009	1973	7.1	7.9	5.76	11.7	13.52
N262	002	009	1973	6.1	6.6	7.19	11.7	13.52
N262	002	012	1973	9.2	10.2	4.30	12.4	13.22
N262	002	012	1973	4.3	4.8	10.39	12.4	13.22
N262	002	017	1973	7.8	8.6	6.61	15.0	13.16
N262	002	017	1973	5.6	6.1	8.87	15.0	13.16
N262	002	019	1973	11.7	13.0	1.40	13.0	12.85
N262	002	019	1973	10.7	11.7	2.35	13.0	12.85
N262	002	035	1973	20.9	22.4	1.40	22.4	15.36
N262	002	035	1973	4.1	4.6	13.38	22.4	15.36
N262	002	036	1973	15.3	16.3	4.21	21.3	14.68
N262	002	036	1973	5.6	6.1	11.28	21.3	14.68
N262	002	039	1973	14.2	15.5	4.97	20.6	14.45
N262	002	039	1973	7.1	7.9	10.30	20.6	14.45
N262	002	053	1973	19.3	21.3	2.23	23.1	14.26
N262	002	053	1973	2.5	2.8	13.11	23.1	14.26
N262	002	059	1973	16.6	17.6	0.00	16.0	12.50
N262	002	059	1973	10.1	10.9	5.61	16.0	12.50
N262	003	007	1973	12.9	14.0	1.40	14.0	12.40
N262	003	007	1973	9.4	10.2	4.57	14.0	12.40
N262	003	016	1973	8.3	9.1	4.60	11.7	11.27
N262	003	016	1973	5.1	5.6	9.24	11.7	11.27
N262	003	017	1973	8.6	9.4	6.55	14.5	13.80
N262	003	017	1973	7.3	8.1	7.77	14.5	13.80
N262	003	021	1973	7.1	7.9	5.79	10.4	12.64
N262	003	021	1973	4.8	5.3	9.17	10.4	12.64
N262	003	028	1973	13.8	15.5	1.40	15.5	12.73
N262	003	028	1973	12.2	13.2	3.02	15.5	12.73
N262	003	033	1973	11.7	13.0	4.08	16.8	13.58
N262	003	033	1973	9.4	10.4	6.80	16.8	13.58
N262	003	033	1973	7.9	8.9	7.50	16.8	13.58
N262	003	051	1973	6.3	7.1	4.63	9.7	10.78

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	003	051	1973	4.1	4.6	8.14	9.7	10.78
N262	003	055	1973	16.0	17.3	4.24	22.1	14.96
N262	003	055	1973	8.4	9.4	9.27	22.1	14.96
N262	003	056	1973	16.5	17.8	3.08	20.3	16.05
N262	003	056	1973	2.5	3.0	14.39	20.3	16.05
N262	004	021	1973	15.5	18.0	0.00	16.0	11.15
N262	004	021	1973	11.2	12.2	3.14	16.0	11.15
N262	004	021	1973	2.8	3.3	10.12	16.0	11.15
N262	004	022	1973	10.1	11.0	0.00	9.4	10.44
N262	004	022	1973	7.3	8.1	3.05	9.4	10.44
N262	004	023	1973	4.8	5.3	8.32	18.0	11.05
N262	004	023	1973	2.3	2.8	9.63	18.0	11.05
N262	004	027	1973	10.1	10.9	2.26	12.2	11.51
N262	004	027	1973	2.8	3.3	9.33	12.2	11.51
N262	004	029	1973	11.7	13.5	0.70	12.2	10.51
N262	004	029	1973	6.6	7.1	5.30	12.2	10.51
N262	004	038	1973	14.3	16.3	0.70	14.7	11.69
N262	004	038	1973	11.2	12.2	2.96	14.7	11.69
N262	004	039	1973	15.3	17.8	0.70	17.0	12.58
N262	004	039	1973	8.4	9.4	5.88	17.0	12.58
N262	004	101	1973	16.9	18.5	2.71	21.1	13.95
N262	004	101	1973	7.9	8.4	8.75	21.1	13.95
N262	004	102	1973	9.2	10.2	7.68	22.9	12.79
N262	004	102	1973	4.6	5.1	11.13	22.9	12.79
N262	005	002	1973	15.5	17.8	0.70	16.8	13.22
N262	005	002	1973	5.8	6.6	9.48	16.8	13.22
N262	005	024	1973	15.6	17.6	0.00	16.0	14.19
N262	005	024	1973	12.7	13.5	4.33	16.0	14.19
N262	005	024	1973	7.9	8.4	9.45	16.0	14.19
N262	005	025	1973	13.4	16.5	0.00	13.5	11.18
N262	005	025	1973	5.0	5.8	7.59	13.5	11.18
N262	005	039	1973	4.1	4.6	9.08	10.9	10.75
N262	005	039	1973	2.0	2.3	9.45	10.9	10.75
N262	005	051	1973	12.6	14.2	0.70	13.0	12.76
N262	005	051	1973	4.8	5.3	9.57	13.0	12.76
N262	005	101	1973	20.9	24.7	0.00	22.1	15.26
N262	005	101	1973	19.3	22.1	1.40	22.1	15.26
N262	005	101	1973	6.1	6.9	11.67	22.1	15.26
N262	005	102	1973	17.0	19.0	1.40	19.0	15.23
N262	005	102	1973	10.4	11.4	6.55	19.0	15.23
N262	005	103	1973	17.5	20.3	1.40	20.3	13.61
N262	005	103	1973	6.6	7.6	9.33	20.3	13.61
N262	005	104	1973	18.2	21.1	0.70	19.3	14.62
N262	005	104	1973	15.3	16.8	2.83	19.3	14.62
N262	006	002	1973	22.7	26.4	0.00	22.4	14.86
N262	006	002	1973	5.1	5.6	10.73	22.4	14.86
N262	006	009	1973	4.3	4.8	9.75	11.2	13.34
N262	006	009	1973	3.3	3.6	11.03	11.2	13.34
N262	006	015	1973	19.6	22.6	0.70	20.8	15.47
N262	006	015	1973	14.7	15.7	4.69	20.8	15.47

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N262	006	034	1973	11.4	12.4	5.12	17.5	14.19
N262	006	034	1973	6.6	7.4	9.91	17.5	14.19
N262	006	040	1973	9.4	10.2	5.15	14.0	12.97
N262	006	040	1973	4.6	5.1	10.49	14.0	12.97
N262	006	042	1973	8.1	8.9	8.32	18.5	13.92
N262	006	042	1973	5.8	6.3	10.36	18.5	13.92
N262	006	047	1973	17.6	19.8	1.40	19.8	13.50
N262	006	047	1973	13.7	14.7	4.02	19.8	13.50
N262	006	051	1973	25.3	28.2	0.70	26.2	15.17
N262	006	051	1973	5.3	5.8	12.22	26.2	15.17
N262	006	058	1973	13.5	15.6	0.00	12.4	11.69
N262	006	058	1973	8.1	8.6	4.63	12.4	11.69
N261	001	005	1973	49.1	54.9	3.93	62.5	45.92
N261	001	005	1973	42.3	44.7	14.90	62.5	45.92
N261	001	005	1973	22.8	24.4	35.08	62.5	45.92
N261	001	005	1973	20.3	21.8	36.27	62.5	45.92
N261	001	005	1973	10.7	11.7	41.67	62.5	45.92
N261	001	010	1973	35.7	45.2	0.70	44.2	37.85
N261	001	010	1973	30.1	34.0	5.61	44.2	37.85
N261	001	010	1973	12.5	13.7	32.37	44.2	37.85
N261	001	016	1973	51.1	61.4	0.00	56.4	43.85
N261	001	016	1973	46.5	51.3	3.57	56.4	43.85
N261	001	016	1973	39.9	42.4	12.53	56.4	43.85
N261	001	016	1973	21.8	23.4	32.49	56.4	43.85
N261	001	016	1973	9.4	10.7	40.08	56.4	43.85
N261	001	032	1973	29.2	31.2	21.34	54.1	43.67
N261	001	032	1973	24.9	26.2	28.04	54.1	43.67
N261	001	032	1973	19.6	21.1	31.46	54.1	43.67
N261	001	032	1973	17.2	18.5	33.38	54.1	43.67
N261	001	033	1973	47.5	56.6	0.00	54.6	43.27
N261	001	033	1973	41.4	44.4	6.25	54.6	43.27
N261	001	033	1973	22.3	24.1	30.36	54.6	43.27
N261	001	033	1973	17.5	19.0	34.81	54.6	43.27
N261	002	004	1973	41.5	44.7	15.82	65.0	44.99
N261	002	004	1973	37.5	39.6	21.55	65.0	44.99
N261	002	004	1973	34.9	37.1	24.69	65.0	44.99
N261	002	004	1973	13.2	14.2	39.26	65.0	44.99
N261	002	004	1973	10.7	11.7	40.11	65.0	44.99
N261	002	007	1973	33.7	36.6	5.88	44.2	39.31
N261	002	007	1973	31.7	34.0	10.61	44.2	39.31
N261	002	007	1973	22.4	23.9	26.64	44.2	39.31
N261	002	008	1973	33.1	34.8	26.18	62.7	46.26
N261	002	008	1973	25.3	27.2	32.92	62.7	46.26
N261	002	008	1973	23.0	24.6	34.35	62.7	46.26
N261	002	008	1973	18.2	19.6	37.43	62.7	46.26
N261	002	008	1973	15.8	17.0	38.86	62.7	46.26
N261	002	014	1973	34.4	37.6	2.65	40.1	39.31
N261	002	014	1973	28.2	30.0	14.63	40.1	39.31
N261	002	014	1973	21.1	22.4	26.37	40.1	39.31
N261	002	020	1973	44.9	48.3	12.19	63.5	47.90

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	002	020	1973	37.9	40.6	21.67	63.5	47.90
N261	002	020	1973	35.7	38.1	25.05	63.5	47.90
N261	002	020	1973	23.7	25.4	34.75	63.5	47.90
N261	002	020	1973	16.3	17.8	39.65	63.5	47.90
N261	003	004	1973	60.2	67.6	0.00	61.0	39.46
N261	003	004	1973	47.9	55.9	2.26	61.0	39.46
N261	003	004	1973	45.1	50.8	3.57	61.0	39.46
N261	003	004	1973	38.2	40.6	14.60	61.0	39.46
N261	003	004	1973	10.4	11.2	36.15	61.0	39.46
N261	003	021	1973	26.6	27.9	16.64	43.2	42.57
N261	003	021	1973	24.4	25.4	19.90	43.2	42.57
N261	003	021	1973	19.4	20.3	26.70	43.2	42.57
N261	003	021	1973	9.4	10.2	36.82	43.2	42.57
N261	003	022	1973	21.4	23.1	11.64	35.8	31.69
N261	003	022	1973	9.6	10.4	26.58	35.8	31.69
N261	003	022	1973	7.3	7.9	28.38	35.8	31.69
N261	003	023	1973	44.0	52.1	2.23	53.8	40.53
N261	003	023	1973	40.5	46.2	3.35	53.8	40.53
N261	003	023	1973	37.4	41.1	6.10	53.8	40.53
N261	003	023	1973	7.6	8.1	37.43	53.8	40.53
N261	003	027	1973	64.2	72.9	0.70	69.8	46.72
N261	003	027	1973	53.0	59.7	5.06	69.8	46.72
N261	003	027	1973	52.3	57.1	6.10	69.8	46.72
N261	003	027	1973	28.0	29.2	30.02	69.8	46.72
N261	003	027	1973	20.6	21.6	34.78	69.8	46.72
N261	003	027	1973	5.8	6.3	43.89	69.8	46.72
N261	004	014	1973	42.7	50.5	0.70	46.5	39.31
N261	004	014	1973	36.5	38.9	6.10	46.5	39.31
N261	004	014	1973	34.5	36.3	10.67	46.5	39.31
N261	004	014	1973	7.9	8.4	35.54	46.5	39.31
N261	004	016	1973	40.9	45.5	6.10	60.7	40.50
N261	004	016	1973	38.6	42.9	8.11	60.7	40.50
N261	004	016	1973	34.6	37.8	14.57	60.7	40.50
N261	004	016	1973	33.0	35.3	16.79	60.7	40.50
N261	004	016	1973	11.5	12.4	35.91	60.7	40.50
N261	004	021	1973	48.0	53.3	5.46	61.0	45.47
N261	004	021	1973	46.3	50.8	7.65	61.0	45.47
N261	004	021	1973	42.3	45.7	12.62	61.0	45.47
N261	004	021	1973	14.2	15.2	38.92	61.0	45.47
N261	004	021	1973	6.8	7.6	42.28	61.0	45.47
N261	004	023	1973	37.8	40.6	7.59	50.8	39.25
N261	004	023	1973	26.6	27.9	21.58	50.8	39.25
N261	004	023	1973	16.8	17.8	29.14	50.8	39.25
N261	004	023	1973	11.7	12.7	32.49	50.8	39.25
N261	004	024	1973	52.7	62.0	2.50	67.1	45.50
N261	004	024	1973	51.1	59.4	3.93	67.1	45.50
N261	004	024	1973	22.9	23.9	34.17	67.1	45.50
N261	004	024	1973	15.3	16.3	38.65	67.1	45.50
N261	004	024	1973	12.8	13.7	40.05	67.1	45.50
N261	005	001	1973	63.1	70.9	0.70	67.3	46.38

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N261	005	001	1973	59.4	67.3	1.40	67.3	46.38
N261	005	001	1973	45.2	49.5	12.68	67.3	46.38
N261	005	001	1973	36.2	39.4	21.52	67.3	46.38
N261	005	001	1973	5.8	6.3	44.01	67.3	46.38
N261	005	002	1973	43.0	46.0	12.19	61.2	46.79
N261	005	002	1973	38.5	40.9	18.26	61.2	46.79
N261	005	002	1973	36.2	38.4	20.91	61.2	46.79
N261	005	002	1973	33.9	35.8	23.71	61.2	46.79
N261	005	002	1973	29.0	30.7	28.53	61.2	46.79
N261	005	009	1973	42.0	44.7	5.67	57.4	41.82
N261	005	009	1973	32.9	34.5	15.51	57.4	41.82
N261	005	009	1973	23.4	24.4	25.79	57.4	41.82
N261	005	009	1973	18.4	19.3	30.69	57.4	41.82
N261	005	009	1973	10.9	11.7	34.93	57.4	41.82
N261	005	014	1973	27.6	34.1	0.00	30.5	33.67
N261	005	014	1973	23.8	25.4	4.48	30.5	33.67
N261	005	014	1973	4.7	5.1	32.49	30.5	33.67
N261	005	018	1973	49.4	59.6	0.00	54.6	43.30
N261	005	018	1973	25.3	26.7	26.09	54.6	43.30
N261	005	018	1973	17.9	19.0	31.91	54.6	43.30
N261	005	018	1973	10.5	11.4	37.98	54.6	43.30
N261	006	004	1973	41.0	46.5	4.11	51.6	39.46
N261	006	004	1973	38.2	41.4	7.38	51.6	39.46
N261	006	004	1973	36.2	38.9	9.57	51.6	39.46
N261	006	004	1973	10.3	10.9	34.41	51.6	39.46
N261	006	018	1973	32.4	37.8	2.23	40.4	39.92
N261	006	018	1973	18.6	20.1	27.13	40.4	39.92
N261	006	018	1973	11.6	12.4	32.83	40.4	39.92
N261	006	022	1973	54.0	65.4	0.00	62.2	44.50
N261	006	022	1973	51.6	57.1	2.93	62.2	44.50
N261	006	022	1973	49.4	54.6	3.44	62.2	44.50
N261	006	022	1973	39.7	41.9	12.34	62.2	44.50
N261	006	022	1973	27.7	29.2	25.36	62.2	44.50
N261	006	024	1973	45.4	56.1	0.70	54.6	44.19
N261	006	024	1973	37.0	39.4	8.99	54.6	44.19
N261	006	024	1973	27.6	29.2	22.22	54.6	44.19
N261	006	024	1973	13.0	14.0	36.70	54.6	44.19
N261	006	027	1973	60.6	71.7	0.00	63.5	43.79
N261	006	027	1973	45.9	48.3	8.93	63.5	43.79
N261	006	027	1973	41.4	43.2	14.14	63.5	43.79
N261	006	027	1973	16.9	17.8	36.58	63.5	43.79
N261	006	027	1973	7.1	7.6	41.24	63.5	43.79
N386	001	051	1976	6.0	6.5	7.15	14.0	9.55
N386	001	131	1976	10.2	10.6	2.90	12.9	8.00
N386	001	097	1976	9.2	10.0	2.90	12.7	7.67
N386	001	127	1976	11.5	12.9	1.40	12.9	7.75
N386	001	127	1976	5.7	5.9	5.50	12.9	7.75
N386	001	991	1976	6.6	7.2	2.56	9.2	6.55
N386	001	992	1976	12.7	14.2	0.70	11.9	7.53
N386	001	992	1976	7.3	7.9	3.62	11.9	7.53

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	001	993	1976	6.5	7.1	2.11	9.1	5.67
N386	001	994	1976	11.3	12.6	0.00	9.2	6.94
N386	001	116	1976	10.8	11.4	1.70	12.4	7.05
N386	001	116	1976	6.0	6.4	4.00	12.4	7.05
N386	001	995	1976	9.7	10.5	1.40	10.5	6.59
N386	001	995	1976	8.7	9.5	1.59	10.5	6.59
N386	001	996	1976	7.2	8.2	2.03	9.2	4.98
N386	001	997	1976	10.4	11.3	1.40	11.3	6.92
N386	001	997	1976	4.7	5.3	4.07	11.3	6.92
N386	002	085	1976	7.5	7.9	4.45	12.9	7.95
N386	002	053	1976	8.6	9.1	2.75	11.1	7.08
N386	002	053	1976	7.6	8.1	3.35	11.1	7.08
N386	002	121	1976	12.3	13.4	1.40	13.4	8.04
N386	002	024	1976	7.3	8.3	0.70	6.6	5.51
N386	002	112	1976	12.4	13.0	1.40	13.0	8.20
N386	002	098	1976	8.5	9.0	4.32	13.0	9.40
N386	002	098	1976	5.5	6.0	6.99	13.0	9.40
N386	002	070	1976	7.8	8.2	0.70	7.2	5.54
N386	002	029	1976	11.6	12.7	0.00	11.5	6.76
N386	002	029	1976	7.7	8.5	2.70	11.5	6.76
N386	002	119	1976	11.0	12.2	1.40	12.2	6.59
N386	002	119	1976	5.5	6.2	3.54	12.2	6.59
N386	002	067	1976	7.7	8.6	1.40	8.6	6.30
N386	002	042	1976	8.4	9.0	2.52	11.0	7.06
N386	002	042	1976	7.4	8.0	3.33	11.0	7.06
N386	002	087	1976	4.7	5.0	4.31	9.0	6.47
N386	003	998	1976	6.4	7.3	0.70	6.5	4.80
N386	003	999	1976	6.9	7.6	0.70	6.0	4.34
N386	003	037	1976	14.2	15.4	0.00	11.8	7.23
N386	003	037	1976	6.4	6.8	3.95	11.8	7.23
N386	003	086	1976	10.1	11.1	0.00	10.1	5.73
N386	003	086	1976	9.6	10.6	0.70	10.1	5.73
N386	003	016	1976	6.9	7.5	3.80	12.5	7.09
N386	003	016	1976	5.9	6.5	4.60	12.5	7.09
N386	003	013	1976	5.7	6.3	3.30	11.3	6.00
N386	003	007	1976	7.3	7.7	0.70	6.5	4.60
N386	003	997	1976	7.0	8.4	0.00	6.8	4.79
N386	003	073	1976	10.5	11.3	1.90	12.3	8.40
N386	003	073	1976	5.7	6.3	5.40	12.3	8.40
N386	003	062	1976	7.1	7.7	2.95	10.7	6.33
N386	003	050	1976	10.8	11.8	0.00	10.8	6.77
N386	003	050	1976	7.3	7.8	2.45	10.8	6.77
N386	003	081	1976	7.0	7.7	4.00	12.7	7.74
N386	001	005	1980	16.0	17.6	1.40	17.6	11.20
N386	001	014	1980	26.2	30.8	0.00	22.8	14.12
N386	001	014	1980	14.3	15.5	6.15	22.8	14.12
N386	001	026	1980	25.8	29.0	0.00	23.4	15.90
N386	001	026	1980	19.4	21.0	2.60	23.4	15.90
N386	001	027	1980	16.1	17.6	1.40	17.6	11.10
N386	001	030	1980	18.0	20.0	2.50	22.9	14.40

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	001	030	1980	7.1	7.9	10.23	22.9	14.40
N386	002	012	1980	23.2	26.7	0.70	23.1	15.00
N386	002	012	1980	7.5	8.1	9.94	23.1	15.00
N386	002	015	1980	26.8	31.2	0.00	23.8	11.10
N386	002	015	1980	18.1	19.7	2.65	23.8	11.10
N386	002	018	1980	12.6	13.8	4.83	18.8	11.70
N386	002	020	1980	16.2	18.5	1.40	18.5	10.90
N386	002	028	1980	27.2	32.0	0.00	23.2	12.20
N386	002	028	1980	9.7	10.5	7.29	23.2	12.20
N386	003	003	1980	17.2	18.4	4.49	23.6	13.35
N386	003	003	1980	7.7	8.5	9.93	23.6	13.35
N386	003	020	1980	22.5	26.0	0.70	22.8	13.00
N386	003	020	1980	16.4	17.8	3.60	22.8	13.00
N386	003	023	1980	11.5	12.5	5.20	17.8	12.10
N386	003	026	1980	17.2	18.4	3.65	23.6	13.80
N386	003	026	1980	10.2	11.0	7.61	23.6	13.80
N386	003	032	1980	16.4	18.9	0.70	17.0	10.70
N386	004	004	1980	25.2	27.7	0.70	25.0	11.10
N386	004	004	1980	15.6	17.2	3.52	25.0	11.10
N386	004	007	1980	11.0	12.0	5.14	17.4	11.90
N386	004	008	1980	17.7	19.5	3.65	24.3	12.80
N386	004	008	1980	15.0	16.4	4.93	24.3	12.80
N386	004	029	1980	9.4	10.2	5.40	17.8	10.40
N386	005	004	1980	21.1	23.9	1.40	23.9	10.30
N386	005	004	1980	10.2	11.4	6.33	23.9	10.30
N386	005	013	1980	21.1	24.0	1.40	24.0	14.70
N386	005	013	1980	12.7	14.1	6.07	24.0	14.70
N386	005	015	1980	23.5	27.3	0.70	23.7	11.30
N386	005	015	1980	21.2	23.7	1.40	23.7	11.30
N386	005	021	1980	17.6	20.7	0.00	17.1	9.90
N386	005	026	1980	14.1	15.5	2.74	18.2	11.10
N386	006	015	1980	17.0	19.8	0.00	17.2	11.35
N386	006	019	1980	20.8	24.1	0.00	22.7	12.95
N386	006	019	1980	9.9	10.9	7.38	22.7	12.95
N386	006	029	1980	17.4	19.5	0.70	17.3	12.20
N386	006	035	1980	20.5	24.5	0.70	23.3	12.80
N386	006	035	1980	19.4	21.8	1.97	23.3	12.80
N386	007	006	1980	21.9	26.7	0.00	22.3	13.50
N386	007	006	1980	15.6	17.0	4.23	22.3	13.50
N386	007	010	1980	10.5	11.3	5.52	18.5	11.05
N386	007	012	1980	10.8	11.8	5.13	18.2	11.70
N386	007	012	1980	6.3	6.9	8.35	18.2	11.70
N386	007	021	1980	17.7	19.7	2.35	22.4	13.90
N386	007	021	1980	11.4	12.4	6.95	22.4	13.90
N386	007	028	1980	21.3	25.5	0.00	23.3	12.50
N386	007	028	1980	11.5	12.5	6.65	23.3	12.50
N386	008	004	1980	24.1	26.9	0.00	22.9	13.60
N386	008	004	1980	16.4	17.6	3.87	22.9	13.60
N386	008	015	1980	21.2	23.4	1.40	23.4	13.45
N386	008	015	1980	14.5	15.7	5.47	23.4	13.45

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N386	008	025	1980	16.0	17.2	2.24	19.9	11.10
N386	008	025	1980	11.0	12.0	4.92	19.9	11.10
N386	008	026	1980	15.6	17.2	2.49	19.0	10.00
N386	008	026	1980	10.4	11.6	4.58	19.0	10.00
N386	008	029	1980	22.6	26.2	0.70	23.8	12.20
N386	008	029	1980	19.3	21.3	2.14	23.8	12.20
N386	009	004	1980	14.7	16.3	1.40	16.3	10.35
N386	009	005	1980	18.9	20.1	2.13	22.5	13.50
N386	009	005	1980	11.2	12.0	7.25	22.5	13.50
N386	009	016	1980	15.3	16.5	3.86	21.5	11.30
N386	009	016	1980	5.7	6.3	8.45	21.5	11.30
N386	009	026	1980	22.6	25.0	0.70	22.8	12.60
N386	009	026	1980	16.7	17.9	4.04	22.8	12.60
N386	009	029	1980	14.8	16.4	1.40	16.4	11.00
N386	010	005	1980	15.0	17.2	0.70	15.6	12.80
N386	010	011	1980	7.5	8.3	5.87	15.8	10.30
N386	010	012	1980	20.3	25.1	0.00	20.9	11.80
N386	010	012	1980	14.5	15.9	3.49	20.9	11.80
N386	010	023	1980	9.5	10.5	8.78	20.6	14.60
N386	010	023	1980	7.3	8.1	10.21	20.6	14.60
N386	010	025	1980	20.2	23.6	0.70	20.5	14.00
N386	010	025	1980	16.2	17.8	2.75	20.5	14.00
N386	011	002	1980	13.3	14.5	7.42	23.8	16.20
N386	011	002	1980	8.0	8.8	10.91	23.8	16.20
N386	011	003	1980	23.3	26.3	0.70	23.6	14.30
N386	011	003	1980	10.1	11.1	9.05	23.6	14.30
N386	011	004	1980	7.8	8.6	7.04	15.9	10.50
N386	011	007	1980	12.3	13.5	3.77	16.0	12.90
N386	011	020	1980	20.0	25.4	0.00	21.8	12.70
N386	011	020	1980	13.8	15.0	5.09	21.8	12.70
N386	012	007	1980	18.5	21.5	0.70	19.7	11.60
N386	012	007	1980	16.6	18.8	1.97	19.7	11.60
N386	012	012	1980	19.7	22.9	0.70	20.5	12.10
N386	012	012	1980	16.0	18.0	2.71	20.5	12.10
N386	012	012	1980	13.1	15.7	0.70	14.4	9.46
N386	012	028	1980	20.4	23.4	0.70	20.8	14.50
N386	012	028	1980	18.6	20.8	1.40	20.8	14.50
N386	012	029	1980	15.0	17.8	0.70	15.3	12.35
N378	001	001	1974	9.7	10.5	1.40	10.5	7.80
N378	001	001	1974	5.4	6.0	4.04	10.5	7.80
N378	001	002	1974	9.6	10.4	1.40	10.4	8.65
N378	001	002	1974	6.8	7.4	3.87	10.4	8.65
N378	001	003	1974	9.5	10.3	2.08	11.3	9.05
N378	001	003	1974	6.5	7.1	5.45	11.3	9.05
N378	001	004	1974	11.8	13.6	0.00	11.4	8.20
N378	001	004	1974	5.8	6.4	4.27	11.4	8.20
N378	001	005	1974	15.0	16.5	1.40	16.5	10.85
N378	001	006	1974	16.1	17.9	0.00	13.9	8.80
N378	001	006	1974	10.7	11.6	3.04	13.9	8.80
N378	001	007	1974	15.1	16.7	1.40	16.7	10.98

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	001	008	1974	14.1	15.5	1.40	15.5	10.85
N378	001	009	1974	6.0	6.8	6.11	14.8	9.60
N378	001	009	1974	5.0	5.8	6.80	14.8	9.60
N378	001	010	1974	11.0	12.0	3.05	15.0	9.60
N378	001	010	1974	4.4	5.0	7.64	15.0	9.60
N378	001	011	1974	10.7	11.7	2.12	13.0	9.30
N378	001	011	1974	6.4	7.0	5.57	13.0	9.30
N378	001	012	1974	10.1	11.1	4.10	15.9	9.80
N378	002	001	1974	16.2	18.4	0.00	14.4	10.40
N378	002	001	1974	9.6	10.4	4.57	14.4	10.40
N378	002	002	1974	12.6	13.6	2.82	15.9	10.30
N378	002	003	1974	11.7	12.7	2.20	13.7	10.75
N378	002	003	1974	6.9	7.7	5.98	13.7	10.75
N378	002	004	1974	7.0	7.8	6.08	13.8	10.75
N378	002	004	1974	5.7	6.3	7.12	13.8	10.75
N378	002	005	1974	9.4	10.2	4.79	15.2	11.40
N378	002	006	1974	12.2	13.0	2.35	15.5	10.20
N378	002	006	1974	8.9	9.7	4.57	15.5	10.20
N378	002	007	1974	6.2	6.8	6.38	13.2	9.30
N378	002	007	1974	5.0	5.6	7.73	13.2	9.30
N378	002	008	1974	10.4	11.3	2.97	13.4	9.70
N378	002	008	1974	9.4	10.4	3.94	13.4	9.70
N378	002	009	1974	10.3	11.7	0.00	10.3	8.40
N378	002	009	1974	9.8	11.0	0.70	10.3	8.40
N378	002	010	1974	8.7	9.5	1.40	9.5	7.65
N378	002	011	1974	6.3	7.1	3.22	10.1	7.85
N378	002	011	1974	4.9	5.5	4.35	10.1	7.85
N378	002	012	1974	8.6	9.6	0.70	8.9	7.90
N378	003	001	1974	17.2	18.8	0.00	14.8	9.10
N378	003	001	1974	10.2	11.0	3.63	14.8	9.10
N378	003	002	1974	7.7	8.5	5.06	14.5	9.60
N378	003	002	1974	5.2	5.8	7.11	14.5	9.60
N378	003	003	1974	11.7	12.7	2.48	13.4	8.20
N378	003	003	1974	10.2	11.0	2.75	13.4	8.20
N378	003	004	1974	6.2	7.0	6.62	14.0	10.50
N378	003	004	1974	5.2	6.0	7.28	14.0	10.50
N378	003	005	1974	4.6	5.2	4.44	8.2	7.40
N378	003	006	1974	10.8	11.9	0.00	9.1	6.85
N378	003	007	1974	8.4	9.2	1.40	9.2	7.10
N378	003	008	1974	5.3	5.9	3.33	8.9	6.65
N378	003	009	1974	12.1	13.4	0.70	11.8	9.20
N378	003	009	1974	5.2	6.0	6.04	11.8	9.20
N378	003	010	1974	12.7	13.9	0.70	13.0	7.90
N378	003	010	1974	5.2	6.0	5.11	13.0	7.90
N378	003	011	1974	7.3	8.1	3.34	11.1	7.90
N378	003	011	1974	5.3	6.1	4.49	11.1	7.90
N378	003	012	1974	8.7	9.3	2.19	11.3	7.25
N378	003	012	1974	5.5	6.1	4.14	11.3	7.25
N378	005	003	1976	14.2	16.5	1.40	16.5	12.40
N378	005	003	1976	8.4	9.0	7.62	16.5	12.40

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	005	005	1976	16.3	19.9	0.00	17.3	10.60
N378	005	005	1976	12.5	13.2	4.05	17.3	10.60
N378	005	006	1976	17.3	20.0	0.00	18.4	15.00
N378	005	006	1976	15.1	16.4	2.09	18.4	15.00
N378	005	007	1976	14.4	15.5	1.40	15.5	12.25
N378	005	007	1976	4.5	5.3	10.25	15.5	12.25
N378	005	009	1976	17.1	19.3	0.00	16.7	13.00
N378	005	009	1976	4.9	5.5	11.17	16.7	13.00
N378	005	011	1976	16.9	18.9	0.70	16.3	13.76
N378	005	011	1976	8.6	9.0	8.33	16.3	13.76
N378	005	016	1976	12.4	13.2	5.45	17.5	14.82
N378	005	016	1976	10.5	11.1	7.61	17.5	14.82
N378	005	019	1976	11.0	11.8	4.71	16.2	14.30
N378	005	019	1976	8.7	9.5	7.00	16.2	14.30
N378	005	022	1976	15.5	17.2	0.70	15.7	13.09
N378	005	022	1976	8.2	9.0	7.83	15.7	13.09
N378	005	031	1976	14.4	15.4	2.64	17.0	11.00
N378	005	031	1976	8.4	9.0	6.42	17.0	11.00
N378	006	001	1976	12.5	13.3	6.80	25.2	12.40
N378	006	001	1976	10.4	11.0	8.60	25.2	12.40
N378	006	009	1976	14.8	15.7	5.37	22.6	12.20
N378	006	009	1976	5.9	6.5	10.20	22.6	12.20
N378	006	010	1976	11.7	12.7	4.48	17.5	11.60
N378	006	010	1976	6.0	6.8	8.40	17.5	11.60
N378	006	020	1976	24.1	27.3	0.70	24.9	13.40
N378	006	020	1976	18.7	19.3	4.27	24.9	13.40
N378	006	021	1976	19.0	21.3	0.00	18.7	12.90
N378	006	021	1976	7.9	8.5	8.35	18.7	12.90
N378	006	026	1976	23.0	26.3	0.00	21.9	13.80
N378	006	026	1976	4.6	5.0	12.01	21.9	13.80
N378	006	033	1976	10.6	11.4	6.00	17.0	12.35
N378	006	033	1976	8.0	8.8	7.85	17.0	12.35
N378	006	035	1976	19.9	22.6	0.70	19.8	12.22
N378	006	035	1976	7.6	8.4	8.04	19.8	12.22
N378	006	037	1976	18.2	19.0	4.20	25.0	15.30
N378	006	037	1976	9.9	10.3	9.90	25.0	15.30
N378	007	001	1976	7.8	8.5	10.40	19.0	15.10
N378	007	001	1976	6.2	6.8	11.80	19.0	15.10
N378	007	006	1976	21.3	24.2	0.00	18.6	10.70
N378	007	006	1976	7.9	8.3	7.63	18.6	10.70
N378	007	007	1976	12.0	12.8	5.66	22.0	12.25
N378	007	007	1976	4.5	5.1	10.80	22.0	12.25
N378	007	011	1976	15.0	15.8	3.95	20.0	14.15
N378	007	011	1976	12.1	12.9	5.90	20.0	14.15
N378	007	017	1976	17.7	19.7	1.40	19.7	13.10
N378	007	017	1976	4.5	4.9	11.55	19.7	13.10
N378	007	021	1976	16.0	17.3	1.40	17.3	11.44
N378	007	021	1976	12.6	13.3	3.91	17.3	11.44
N378	007	025	1976	19.5	21.7	0.70	19.5	13.20
N378	007	025	1976	18.4	19.5	1.40	19.5	13.20

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	007	026	1976	16.1	18.9	0.00	15.9	12.50
N378	007	026	1976	4.5	4.9	10.73	15.9	12.50
N378	007	027	1976	12.8	13.6	3.07	16.0	10.87
N378	007	027	1976	4.3	4.9	8.65	16.0	10.87
N378	007	042	1976	15.8	17.3	2.90	19.5	12.55
N378	007	042	1976	8.4	9.0	8.22	19.5	12.55
N378	008	002	1976	22.8	24.9	0.70	22.0	11.45
N378	008	002	1976	18.9	20.0	2.18	22.0	11.45
N378	008	008	1976	21.0	23.2	0.00	19.8	12.90
N378	008	008	1976	19.5	21.5	0.70	19.8	12.90
N378	008	014	1976	17.3	19.1	0.70	17.4	14.02
N378	008	014	1976	7.9	8.3	9.78	17.4	14.02
N378	008	016	1976	15.9	16.5	3.37	18.4	14.60
N378	008	016	1976	9.6	10.0	9.18	18.4	14.60
N378	008	017	1976	19.9	23.1	0.00	17.9	12.90
N378	008	017	1976	7.2	8.2	9.02	17.9	12.90
N378	008	022	1976	11.2	12.0	7.34	21.5	12.85
N378	008	022	1976	7.9	8.5	9.20	21.5	12.85
N378	008	028	1976	16.2	17.2	1.40	17.2	12.00
N378	008	028	1976	14.8	15.4	3.75	17.2	12.00
N378	008	031	1976	19.7	22.5	0.70	20.4	13.30
N378	008	031	1976	10.0	10.6	8.17	20.4	13.30
N378	008	037	1976	13.6	14.6	3.96	18.6	13.58
N378	008	037	1976	6.3	6.8	10.71	18.6	13.58
N378	008	039	1976	8.6	9.4	8.70	19.6	13.20
N378	008	039	1976	4.6	5.0	11.63	19.6	13.20
N378	001	001	1978	17.4	18.5	5.50	28.8	15.20
N378	001	021	1978	16.6	17.5	5.10	22.2	16.50
N378	001	021	1978	10.6	11.2	10.70	22.2	16.50
N378	001	020	1978	14.4	15.0	6.90	22.5	15.90
N378	001	020	1978	12.1	12.5	9.25	22.5	15.90
N378	001	100	1978	25.7	28.5	1.40	28.5	16.00
N378	001	100	1978	3.4	3.6	14.40	28.5	16.00
N378	001	101	1978	19.1	21.5	0.00	18.9	14.50
N378	001	101	1978	6.2	6.4	12.50	18.9	14.50
N378	001	103	1978	18.7	19.5	5.10	24.5	15.40
N378	001	103	1978	13.6	14.2	7.27	24.5	15.40
N378	002	004	1978	18.0	19.6	4.40	24.6	15.60
N378	002	004	1978	6.8	7.2	12.40	24.6	15.60
N378	002	019	1978	33.5	38.3	0.00	29.7	18.45
N378	002	019	1978	30.6	34.0	0.70	29.7	18.45
N378	002	100	1978	24.2	26.9	1.40	26.9	16.10
N378	002	101	1978	19.8	20.7	4.30	25.8	17.00
N378	002	102	1978	18.4	19.9	1.40	19.9	15.60
N378	002	102	1978	14.3	14.9	6.20	19.9	15.60
N378	002	103	1978	17.3	19.1	1.40	19.1	16.00
N378	002	103	1978	4.1	4.3	15.20	19.1	16.00
N378	003	001	1978	18.6	19.4	4.27	22.0	15.90
N378	003	001	1978	9.0	9.2	11.25	22.0	15.90
N378	003	003	1978	20.6	22.1	4.00	27.1	16.40

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	003	009	1978	29.3	33.0	0.00	28.0	19.80
N378	003	011	1978	25.5	29.3	0.70	26.0	16.90
N378	003	022	1978	14.7	15.7	5.25	21.1	15.60
N378	003	022	1978	12.5	13.3	7.55	21.1	15.60
N378	003	100	1978	21.8	23.6	1.40	23.6	17.80
N378	003	100	1978	11.1	11.5	11.30	23.6	17.80
N378	004	022	1978	28.5	31.5	0.70	29.0	15.80
N378	004	025	1978	20.1	21.7	1.40	21.7	17.00
N378	004	025	1978	10.6	11.0	10.55	21.7	17.00
N378	004	031	1978	16.2	17.3	8.65	27.7	19.10
N378	004	032	1978	5.6	5.8	13.40	25.0	14.90
N378	004	100	1978	19.5	22.1	1.40	22.1	15.40
N378	004	100	1978	13.2	14.0	6.70	22.1	15.40
N378	004	101	1978	20.5	24.5	0.00	20.3	17.10
N378	004	101	1978	5.3	5.5	14.80	20.3	17.10
N378	009	001	1978	17.1	18.5	0.70	16.6	10.80
N378	009	001	1978	6.0	6.4	8.30	16.6	10.80
N378	009	026	1978	13.1	13.7	4.25	16.2	14.20
N378	009	032	1978	10.9	11.5	6.25	16.7	14.35
N378	009	035	1978	19.3	21.3	0.70	19.7	13.95
N378	009	035	1978	8.9	9.7	8.15	19.7	13.95
N378	009	042	1978	18.9	20.8	1.40	20.8	12.05
N378	009	042	1978	4.9	5.5	9.70	20.8	12.05
N378	009	044	1978	21.2	23.2	0.00	20.8	14.23
N378	009	044	1978	20.2	22.0	0.70	20.8	14.23
N378	010	002	1978	29.4	32.5	0.00	27.5	16.20
N378	010	007	1978	34.8	37.2	0.00	26.8	16.50
N378	010	018	1978	14.9	16.3	1.40	16.3	10.45
N378	010	018	1978	11.1	11.8	3.80	16.3	10.45
N378	010	024	1978	20.3	23.0	0.00	16.0	12.40
N378	010	029	1978	28.3	31.0	0.00	27.8	14.25
N378	010	036	1978	15.0	15.7	2.90	17.7	11.75
N378	010	036	1978	12.3	12.7	4.50	17.7	11.75
N378	011	011	1978	11.4	11.8	7.05	16.8	15.20
N378	011	011	1978	4.1	4.3	13.75	16.8	15.20
N378	011	014	1978	29.0	31.3	0.00	21.1	14.50
N378	011	014	1978	12.7	13.4	7.50	21.1	14.50
N378	011	026	1978	23.6	25.8	0.00	23.0	16.50
N378	011	026	1978	12.5	12.9	8.30	23.0	16.50
N378	011	028	1978	16.4	17.5	0.70	16.6	14.70
N378	011	040	1978	13.1	13.5	6.65	21.0	14.80
N378	011	040	1978	10.9	11.3	8.85	21.0	14.80
N378	011	042	1978	5.6	5.8	8.70	15.7	11.40
N378	012	006	1978	11.1	11.5	5.20	14.5	12.50
N378	012	006	1978	7.3	7.5	8.45	14.5	12.50
N378	012	010	1978	13.3	14.6	0.70	13.3	12.80
N378	012	010	1978	9.9	10.3	5.00	13.3	12.80
N378	012	015	1978	12.0	12.6	6.30	20.1	14.70
N378	012	015	1978	9.7	10.1	8.35	20.1	14.70
N378	012	019	1978	22.2	24.7	0.70	22.0	14.70

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N378	012	019	1978	7.1	7.3	11.50	22.0	14.70
N378	012	030	1978	18.2	20.2	1.40	20.2	16.90
N378	012	030	1978	9.6	10.0	10.35	20.2	16.90
N378	012	034	1978	9.6	9.8	6.05	13.8	12.50
N378	012	034	1978	7.3	7.5	8.35	13.8	12.50
N379	001	009	1977	24.2	28.4	1.50	28.4	24.30
N379	001	009	1977	18.1	19.0	12.00	28.4	24.30
N379	001	013	1977	29.7	33.5	3.00	37.0	24.80
N379	001	013	1977	22.3	23.2	12.00	37.0	24.80
N379	002	006	1977	26.1	28.7	3.00	31.2	26.00
N379	002	006	1977	23.3	25.0	6.00	31.2	26.00
N379	002	014	1977	31.2	35.1	1.50	35.1	26.00
N379	002	014	1977	26.6	27.6	9.00	35.1	26.00
N379	002	017	1977	32.4	38.2	0.70	35.3	27.70
N379	002	017	1977	30.1	33.0	3.00	35.3	27.70
N379	003	011	1977	20.9	21.6	12.00	31.3	26.10
N379	003	011	1977	14.9	15.4	18.00	31.3	26.10
N379	003	020	1977	34.3	38.9	1.50	38.9	28.60
N379	003	020	1977	29.2	30.4	9.00	38.9	28.60
N379	003	021	1977	33.3	40.0	0.70	37.4	26.30
N379	003	021	1977	30.6	35.8	2.00	37.4	26.30
N379	004	011	1977	31.4	35.9	1.50	35.9	26.10
N379	004	011	1977	29.9	31.8	3.00	35.9	26.10
N379	004	026	1977	39.5	45.0	0.00	36.3	27.40
N379	004	026	1977	27.6	30.0	6.00	36.3	27.40
N379	004	029	1977	27.0	30.0	3.00	32.5	26.10
N379	004	029	1977	25.0	25.9	9.00	32.5	26.10
N379	005	001	1977	23.8	24.9	6.00	28.2	23.10
N379	005	001	1977	17.3	18.0	12.00	28.2	23.10
N379	005	008	1977	29.2	35.9	0.70	33.7	24.90
N379	005	008	1977	28.0	33.7	1.50	33.7	24.90
N379	005	013	1977	35.2	41.4	0.00	35.0	25.60
N379	005	013	1977	28.2	30.2	6.00	35.0	25.60
N379	006	012	1977	33.2	37.0	0.00	30.0	20.20
N379	006	012	1977	23.7	25.2	9.00	30.0	20.20
N379	006	013	1977	33.2	35.6	3.00	38.6	23.70
N379	006	013	1977	13.7	14.1	18.00	38.6	23.70
N379	006	028	1977	34.0	41.3	0.70	37.8	23.70
N379	006	028	1977	23.7	25.0	12.00	37.8	23.70
N379	007	002	1977	24.1	28.5	1.50	28.5	19.60
N379	007	002	1977	14.8	15.2	15.00	28.5	19.60
N379	007	008	1977	27.9	29.7	6.00	35.1	25.40
N379	007	008	1977	26.3	27.5	9.00	35.1	25.40
N379	007	015	1977	27.5	33.1	0.70	30.7	24.00
N379	007	015	1977	25.9	30.7	1.50	30.7	24.00
N379	008	007	1977	36.3	41.7	0.00	36.7	29.20
N379	008	007	1977	23.7	24.5	12.00	36.7	29.20
N379	008	018	1977	29.0	33.0	1.50	33.0	26.30
N379	008	018	1977	29.0	32.0	3.00	33.0	26.30
N379	008	023	1977	35.5	40.9	0.00	35.3	24.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	008	023	1977	23.6	24.5	12.00	35.3	24.00
N379	009	001	1977	29.6	35.7	0.70	33.7	26.80
N379	009	001	1977	28.8	33.7	1.50	33.7	26.80
N379	009	003	1977	27.4	32.1	1.50	32.1	27.40
N379	009	003	1977	26.7	30.7	2.00	32.1	27.40
N379	009	004	1977	35.2	40.8	0.70	38.1	26.70
N379	009	004	1977	30.2	32.9	3.00	38.1	26.70
N379	010	012	1977	28.9	32.8	2.00	34.8	27.70
N379	010	012	1977	26.7	29.2	6.00	34.8	27.70
N379	010	014	1977	26.5	30.3	1.50	30.3	22.80
N379	010	014	1977	26.3	29.1	2.00	30.3	22.80
N379	010	031	1977	29.7	33.2	3.00	35.6	25.00
N379	010	031	1977	25.2	26.1	9.00	35.6	25.00
N379	011	001	1977	40.8	47.2	0.00	42.6	28.10
N379	011	001	1977	31.7	34.1	6.00	42.6	28.10
N379	011	014	1977	27.2	31.0	1.50	31.0	28.50
N379	011	014	1977	22.3	23.3	9.00	31.0	28.50
N379	011	019	1977	38.4	45.9	0.00	41.6	24.70
N379	011	019	1977	19.4	20.2	18.00	41.6	24.70
N379	012	009	1977	27.5	32.1	0.70	29.5	21.10
N379	012	009	1977	25.0	28.8	2.00	29.5	21.10
N379	012	018	1977	31.9	38.2	0.00	33.0	25.90
N379	012	018	1977	16.8	17.5	15.00	33.0	25.90
N379	012	019	1977	29.3	34.9	0.70	33.4	27.50
N379	012	019	1977	28.8	33.4	1.50	33.4	27.50
N379	001	013	1978	31.4	36.4	2.00	38.7	26.00
N379	001	013	1978	31.1	34.9	3.00	38.7	26.00
N379	001	029	1978	29.7	32.4	3.00	34.6	24.30
N379	001	029	1978	25.5	27.2	9.00	34.6	24.30
N379	001	030	1978	42.8	50.6	0.00	44.2	27.80
N379	001	030	1978	38.8	44.2	1.50	44.2	27.80
N379	002	006	1978	27.1	29.7	3.00	31.7	26.70
N379	002	006	1978	19.2	20.0	15.00	31.7	26.70
N379	002	007	1978	31.4	36.9	1.50	36.9	28.80
N379	002	007	1978	32.0	36.1	2.00	36.9	28.80
N379	002	014	1978	32.5	36.4	1.50	36.4	25.50
N379	002	014	1978	30.8	34.2	3.00	36.4	25.50
N379	002	017	1978	35.0	41.4	0.00	35.6	28.60
N379	002	017	1978	31.3	35.1	2.00	35.6	28.60
N379	003	004	1978	31.8	34.6	3.00	37.4	26.90
N379	003	004	1978	23.8	24.9	12.00	37.4	26.90
N379	003	005	1978	24.5	26.0	6.00	30.5	24.70
N379	003	005	1978	17.5	18.3	15.00	30.5	24.70
N379	003	011	1978	28.2	31.5	1.50	31.5	27.10
N379	003	011	1978	21.5	22.2	12.00	31.5	27.10
N379	003	012	1978	21.7	23.0	12.00	33.8	27.90
N379	003	012	1978	19.6	20.8	15.00	33.8	27.90
N379	003	016	1978	38.7	43.7	0.00	35.8	27.10
N379	003	016	1978	31.2	35.0	2.00	35.8	27.10
N379	003	021	1978	29.1	30.7	9.00	37.9	28.20

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	004	006	1978	26.5	27.8	9.00	35.2	26.60
N379	004	006	1978	23.2	24.4	12.00	35.2	26.60
N379	004	011	1978	32.0	37.3	1.50	37.3	26.40
N379	004	011	1978	25.9	27.4	9.00	37.3	26.40
N379	004	026	1978	34.8	41.2	0.70	38.0	28.40
N379	004	026	1978	33.3	38.0	1.50	38.0	28.40
N379	004	029	1978	30.4	33.1	2.00	33.5	27.90
N379	004	029	1978	23.6	24.2	12.00	33.5	27.90
N379	005	001	1978	25.4	31.3	0.00	30.5	22.30
N379	005	001	1978	23.9	26.9	3.00	30.5	22.30
N379	005	013	1978	26.7	28.4	9.00	35.7	26.80
N379	005	013	1978	19.8	21.2	15.00	35.7	26.80
N379	005	023	1978	36.6	43.1	0.70	40.8	25.40
N379	005	023	1978	36.0	40.8	1.50	40.8	25.40
N379	006	001	1978	27.2	30.8	3.00	32.7	26.50
N379	006	001	1978	22.6	24.4	9.00	32.7	26.50
N379	006	012	1978	21.7	22.6	12.00	31.2	27.80
N379	006	012	1978	18.4	19.3	15.00	31.2	27.80
N379	006	013	1978	33.6	39.8	2.00	40.4	25.20
N379	006	013	1978	32.8	37.3	3.00	40.4	25.20
N379	006	028	1978	30.3	35.7	3.00	38.7	29.60
N379	006	028	1978	30.5	33.9	6.00	38.7	29.60
N379	007	001	1978	30.4	37.6	0.70	35.0	29.70
N379	007	001	1978	27.8	29.7	6.00	35.0	29.70
N379	007	008	1978	31.0	34.5	2.00	35.3	27.30
N379	007	008	1978	15.5	16.6	18.00	35.3	27.30
N379	007	009	1978	24.6	27.1	3.00	29.5	25.00
N379	007	009	1978	16.0	17.0	15.00	29.5	25.00
N379	007	015	1978	26.9	29.9	2.00	30.7	27.10
N379	007	015	1978	19.4	20.6	12.00	30.7	27.10
N379	007	022	1978	41.6	48.6	0.00	40.5	29.20
N379	007	022	1978	38.4	44.4	0.70	40.5	29.20
N379	007	023	1978	32.5	37.7	1.50	37.7	27.80
N379	007	023	1978	21.3	22.3	15.00	37.7	27.80
N379	007	026	1978	35.5	39.4	3.00	41.0	26.70
N379	007	026	1978	29.0	30.8	9.00	41.0	26.70
N379	008	003	1978	35.2	40.9	0.70	37.3	29.90
N379	008	003	1978	33.0	37.3	1.50	37.3	29.90
N379	008	012	1978	41.0	46.0	0.00	38.8	25.90
N379	008	012	1978	31.7	33.7	6.00	38.8	25.90
N379	008	018	1978	27.1	28.5	9.00	35.2	27.90
N379	008	023	1978	32.2	38.8	0.00	33.0	24.50
N379	008	023	1978	23.7	25.0	9.00	33.0	24.50
N379	009	001	1978	33.5	38.5	0.00	33.9	28.30
N379	009	001	1978	29.5	33.9	1.50	33.9	28.30
N379	009	003	1978	28.4	32.3	2.00	33.2	28.70
N379	009	003	1978	24.9	26.7	6.00	33.2	28.70
N379	009	004	1978	37.8	44.8	0.00	39.0	27.00
N379	009	004	1978	27.1	28.4	9.00	39.0	27.00
N379	009	035	1978	33.0	38.2	0.70	35.7	29.00

Appendix 7. Sectional measurement data for Golden Downs.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N379	009	035	1978	31.5	33.8	3.00	35.7	29.00
N379	010	001	1978	36.0	42.8	0.00	38.4	25.70
N379	010	001	1978	26.0	27.5	9.00	38.4	25.70
N379	010	012	1978	34.2	41.1	0.00	35.3	28.80
N379	010	012	1978	28.4	30.6	6.00	35.3	28.80
N379	010	014	1978	29.7	34.0	0.70	31.0	23.70
N379	010	014	1978	26.7	30.2	2.00	31.0	23.70
N379	010	031	1978	32.4	36.3	1.50	36.3	27.20
N379	010	031	1978	32.6	35.8	2.00	36.3	27.20
N379	011	001	1978	36.9	40.6	2.00	43.5	29.80
N379	011	001	1978	36.0	39.0	3.00	43.5	29.80
N379	011	004	1978	29.9	34.8	0.70	32.6	26.00
N379	011	004	1978	26.0	27.7	6.00	32.6	26.00
N379	011	006	1978	33.9	37.5	2.00	38.5	28.10
N379	011	006	1978	24.5	25.7	12.00	38.5	28.10
N379	011	019	1978	35.2	39.5	3.00	43.0	30.00
N379	011	019	1978	30.9	33.2	9.00	43.0	30.00
N379	012	005	1978	29.2	35.2	0.70	32.3	23.60
N379	012	005	1978	24.7	26.5	6.00	32.3	23.60
N379	012	009	1978	26.0	30.1	1.50	30.1	22.60
N379	012	009	1978	21.2	22.4	9.00	30.1	22.60
N379	012	018	1978	28.5	33.8	2.00	34.1	26.70
N379	012	018	1978	28.7	32.8	3.00	34.1	26.70
N379	012	019	1978	31.6	36.5	0.70	34.0	28.10
N379	012	019	1978	26.0	28.2	6.00	34.0	28.10

Appendix 8. Summary of sectionally measured trees for Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N262	001	001	1973	12.7	12.94	0.0658374	0.0781536
N262	001	016	1973	18.0	13.86	0.1384945	0.1658345
N262	001	021	1973	22.4	16.66	0.2208488	0.2730560
N262	001	025	1973	14.0	15.23	0.1006286	0.1222081
N262	001	027	1973	22.9	16.14	0.2361277	0.2893924
N262	001	042	1973	24.9	17.76	0.2970006	0.3619432
N262	001	045	1973	25.4	16.97	0.2605532	0.3217627
N262	001	048	1973	16.8	14.25	0.1094210	0.1352647
N262	001	059	1973	14.0	14.02	0.0873530	0.1046187
N262	002	009	1973	11.7	13.52	0.0516746	0.0634671
N262	002	012	1973	12.4	13.22	0.0649115	0.0773277
N262	002	017	1973	15.0	13.16	0.0797695	0.0981663
N262	002	019	1973	13.0	12.85	0.0648671	0.0812625
N262	002	035	1973	22.4	15.36	0.2045255	0.2398491
N262	002	036	1973	21.3	14.68	0.1878730	0.2218202
N262	002	039	1973	20.6	14.45	0.1929832	0.2278282
N262	002	053	1973	23.1	14.26	0.1893056	0.2290210
N262	002	059	1973	16.0	12.50	0.1048832	0.1210763
N262	003	007	1973	14.0	12.40	0.0737466	0.0884488
N262	003	016	1973	11.7	11.27	0.0564368	0.0675368
N262	003	017	1973	14.5	13.80	0.0830362	0.0985787
N262	003	021	1973	10.4	12.64	0.0478372	0.0568834
N262	003	028	1973	15.5	12.73	0.0901252	0.1099052
N262	003	033	1973	16.8	13.58	0.1046223	0.1323955
N262	003	051	1973	9.7	10.78	0.0318616	0.0402807
N262	003	055	1973	22.1	14.96	0.1946288	0.2363562
N262	003	056	1973	20.3	16.05	0.1834625	0.2229654
N262	004	021	1973	16.0	11.15	0.0762357	0.0951519
N262	004	022	1973	9.4	10.44	0.0326436	0.0387405
N262	004	023	1973	18.0	11.05	0.1001653	0.1250355
N262	004	027	1973	12.2	11.51	0.0475002	0.0584240
N262	004	029	1973	12.2	10.51	0.0474177	0.0581060
N262	004	038	1973	14.7	11.69	0.0711131	0.0907093
N262	004	039	1973	17.0	12.58	0.0862267	0.1100170
N262	004	101	1973	21.1	13.95	0.1594290	0.1925100
N262	004	102	1973	22.9	12.79	0.1774263	0.2180251
N262	005	002	1973	16.8	13.22	0.1081186	0.1304562
N262	005	024	1973	16.0	14.19	0.1201528	0.1398833
N262	005	025	1973	13.5	11.18	0.0554589	0.0726834
N262	005	039	1973	10.9	10.75	0.0401626	0.0532495
N262	005	051	1973	13.0	12.76	0.0667539	0.0812099
N262	005	101	1973	22.1	15.26	0.1830374	0.2297904
N262	005	102	1973	19.0	15.23	0.1400347	0.1735462
N262	005	103	1973	20.3	13.61	0.1481866	0.1903433
N262	005	104	1973	19.3	14.62	0.1451806	0.1810630
N262	006	002	1973	22.4	14.86	0.1969310	0.2357730
N262	006	009	1973	11.2	13.34	0.0570309	0.0671029
N262	006	015	1973	20.8	15.47	0.1833609	0.2247845
N262	006	034	1973	17.5	14.19	0.1253855	0.1500607
N262	006	040	1973	14.0	12.97	0.0791294	0.0936761
N262	006	042	1973	18.5	13.92	0.1355399	0.1642339
N262	006	047	1973	19.8	13.50	0.1337004	0.1642097
N262	006	051	1973	26.2	15.17	0.2561073	0.3074073

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N262	006	058	1973	12.4	11.69	0.0557324	0.0673030
N261	001	005	1973	62.5	45.92	4.7273808	5.5306473
N261	001	010	1973	44.2	37.85	1.6333921	2.0632563
N261	001	016	1973	56.4	43.85	3.6982660	4.3575497
N261	001	032	1973	54.1	43.67	3.0077949	3.5506959
N261	001	033	1973	54.6	43.27	3.3973098	3.9653993
N261	002	004	1973	65.0	44.99	4.7641821	5.7696333
N261	002	007	1973	44.2	39.31	2.2108288	2.5958014
N261	002	008	1973	62.7	46.26	4.6046629	5.4323950
N261	002	014	1973	40.1	39.31	1.9836407	2.3130026
N261	002	020	1973	63.5	47.90	4.9279089	5.9014788
N261	003	004	1973	61.0	39.46	3.6189871	4.2505875
N261	003	021	1973	43.2	42.57	1.9131203	2.2365646
N261	003	022	1973	35.8	31.69	0.9559902	1.1789873
N261	003	023	1973	53.8	40.53	2.7467642	3.2967014
N261	003	027	1973	69.8	46.72	5.2121840	6.1899920
N261	004	014	1973	46.5	39.31	2.3746901	2.7280912
N261	004	016	1973	60.7	40.50	3.1563826	3.8906584
N261	004	021	1973	61.0	45.47	4.4515982	5.2937546
N261	004	023	1973	50.8	39.25	2.5169806	2.9784732
N261	004	024	1973	67.1	45.50	4.6410313	5.7057009
N261	005	001	1973	67.3	46.38	4.8980494	5.9697590
N261	005	002	1973	61.2	46.79	4.5070944	5.2606535
N261	005	009	1973	57.4	41.82	2.9725986	3.4648170
N261	005	014	1973	30.5	33.67	0.8864607	1.0273428
N261	005	018	1973	54.6	43.30	3.0434995	3.6763096
N261	006	004	1973	51.6	39.46	2.5485859	3.0756693
N261	006	018	1973	40.4	39.92	1.6488810	1.9999602
N261	006	022	1973	62.2	44.50	3.7659421	4.4248896
N261	006	024	1973	54.6	44.19	2.9471431	3.4937329
N261	006	027	1973	63.5	43.79	4.3680935	4.9755545
N386	001	051	1976	14.0	9.55	0.0672625	0.0787358
N386	001	131	1976	12.9	8.00	0.0499792	0.0577689
N386	001	097	1976	12.7	7.67	0.0465430	0.0571350
N386	001	127	1976	12.9	7.75	0.0413795	0.0500060
N386	001	999	1976	9.2	6.55	0.0206493	0.0264452
N386	001	999	1976	11.9	7.53	0.0377637	0.0457537
N386	001	999	1976	9.1	5.67	0.0191609	0.0228232
N386	001	999	1976	9.2	6.94	0.0222888	0.0274005
N386	001	116	1976	12.4	7.05	0.0401479	0.0457070
N386	001	999	1976	10.5	6.59	0.0267558	0.0319626
N386	001	999	1976	9.2	4.98	0.0180300	0.0237400
N386	001	999	1976	11.3	6.92	0.0282127	0.0340113
N386	002	085	1976	12.9	7.95	0.0472991	0.0538175
N386	002	053	1976	11.1	7.08	0.0364614	0.0423887
N386	002	121	1976	13.4	8.04	0.0505010	0.0604022
N386	002	024	1976	6.6	5.51	0.0101062	0.0127369
N386	002	112	1976	13.0	8.20	0.0464485	0.0525873
N386	002	098	1976	13.0	9.40	0.0576295	0.0660247
N386	002	070	1976	7.2	5.54	0.0121736	0.0135386
N386	002	029	1976	11.5	6.76	0.0262389	0.0315398
N386	002	119	1976	12.2	6.59	0.0326876	0.0412225
N386	002	067	1976	8.6	6.30	0.0170371	0.0207622

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N386	002	042	1976	11.0	7.06	0.0340739	0.0394485
N386	002	087	1976	9.0	6.47	0.0215453	0.0245927
N386	003	999	1976	6.5	4.80	0.0078564	0.0099687
N386	003	999	1976	6.0	4.34	0.0074165	0.0090840
N386	003	037	1976	11.8	7.23	0.0353835	0.0410198
N386	003	086	1976	10.1	5.73	0.0169692	0.0212722
N386	003	016	1976	12.5	7.09	0.0374986	0.0486756
N386	003	013	1976	11.3	6.00	0.0288202	0.0345436
N386	003	007	1976	6.5	4.60	0.0087965	0.0099231
N386	003	999	1976	6.8	4.79	0.0076579	0.0099208
N386	003	073	1976	12.3	8.40	0.0451303	0.0529562
N386	003	062	1976	10.7	6.33	0.0269230	0.0313082
N386	003	050	1976	10.8	6.77	0.0249348	0.0286737
N386	003	081	1976	12.7	7.74	0.0459488	0.0529002
N386	001	005	1980	17.6	11.20	0.1044641	0.1239685
N386	001	014	1980	22.8	14.12	0.2181781	0.2688588
N386	001	026	1980	23.4	15.90	0.2548647	0.3004099
N386	001	027	1980	17.6	11.10	0.0992798	0.1211109
N386	001	030	1980	22.9	14.40	0.2006989	0.2451183
N386	002	012	1980	23.1	15.00	0.2280456	0.2766461
N386	002	015	1980	23.8	11.10	0.1754447	0.2144326
N386	002	018	1980	18.8	11.70	0.1242743	0.1563473
N386	002	020	1980	18.5	10.90	0.1014121	0.1283947
N386	002	028	1980	23.2	12.20	0.1944750	0.2379322
N386	003	003	1980	23.6	13.35	0.2292946	0.2765496
N386	003	020	1980	22.8	13.00	0.1813363	0.2253189
N386	003	023	1980	17.8	12.10	0.1205997	0.1517541
N386	003	026	1980	23.6	13.80	0.2008865	0.2430775
N386	003	032	1980	17.0	10.70	0.0950552	0.1189939
N386	004	004	1980	25.0	11.10	0.1872227	0.2258832
N386	004	007	1980	17.4	11.90	0.1107734	0.1331522
N386	004	008	1980	24.3	12.80	0.1929958	0.2405965
N386	004	029	1980	17.8	10.40	0.0946920	0.1160481
N386	005	004	1980	23.9	10.30	0.1775072	0.2229311
N386	005	013	1980	24.0	14.70	0.1999450	0.2511156
N386	005	015	1980	23.7	11.30	0.1808102	0.2251225
N386	005	021	1980	17.1	9.90	0.0890569	0.1094286
N386	005	026	1980	18.2	11.10	0.1050679	0.1273230
N386	006	015	1980	17.2	11.35	0.0884868	0.1123056
N386	006	019	1980	22.7	12.95	0.1710459	0.2091348
N386	006	029	1980	17.3	12.20	0.1149525	0.1384921
N386	006	035	1980	23.3	12.80	0.1550297	0.1977234
N386	007	006	1980	22.3	13.50	0.1854844	0.2300647
N386	007	010	1980	18.5	11.05	0.1131699	0.1329409
N386	007	012	1980	18.2	11.70	0.1050957	0.1317171
N386	007	021	1980	22.4	13.90	0.1758524	0.2203462
N386	007	028	1980	23.3	12.50	0.1696890	0.2120861
N386	008	004	1980	22.9	13.60	0.1940627	0.2305586
N386	008	015	1980	23.4	13.45	0.2113526	0.2557142
N386	008	025	1980	19.9	11.10	0.1197099	0.1440768
N386	008	026	1980	19.0	10.00	0.0995449	0.1245982
N386	008	029	1980	23.8	12.20	0.1716754	0.2172137
N386	009	004	1980	16.3	10.35	0.0786564	0.0962456

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N386	009	005	1980	22.5	13.50	0.1997895	0.2339255
N386	009	016	1980	21.5	11.30	0.1516765	0.1862015
N386	009	026	1980	22.8	12.60	0.1919699	0.2277578
N386	009	029	1980	16.4	11.00	0.0850723	0.1034269
N386	010	005	1980	15.6	12.80	0.0987218	0.1206510
N386	010	011	1980	15.8	10.30	0.0726780	0.0917787
N386	010	012	1980	20.9	11.80	0.1363651	0.1750326
N386	010	023	1980	20.6	14.60	0.1662006	0.2104277
N386	010	025	1980	20.5	14.00	0.1674933	0.2102008
N386	011	002	1980	23.8	16.20	0.2323713	0.2837965
N386	011	003	1980	23.6	14.30	0.2332098	0.2858816
N386	011	004	1980	15.9	10.50	0.0875545	0.1068451
N386	011	007	1980	16.0	12.90	0.1044624	0.1299067
N386	011	020	1980	21.8	12.70	0.1570713	0.2016478
N386	012	007	1980	19.7	11.60	0.1213445	0.1529597
N386	012	012	1980	20.5	12.10	0.1476429	0.1885456
N386	012	012	1980	14.4	9.46	0.0544332	0.0723141
N386	012	028	1980	20.8	14.50	0.1889324	0.2293788
N386	012	029	1980	15.3	12.35	0.0903236	0.1167009
N378	001	001	1974	10.5	7.80	0.0262586	0.0317058
N378	001	002	1974	10.4	8.65	0.0314791	0.0370768
N378	001	003	1974	11.3	9.05	0.0412836	0.0486899
N378	001	004	1974	11.4	8.20	0.0321560	0.0396810
N378	001	005	1974	16.5	10.85	0.0851995	0.1022279
N378	001	006	1974	13.9	8.80	0.0550584	0.0664781
N378	001	007	1974	16.7	10.98	0.0954009	0.1140729
N378	001	008	1974	15.5	10.85	0.0735884	0.0885176
N378	001	009	1974	14.8	9.60	0.0621224	0.0756856
N378	001	010	1974	15.0	9.60	0.0646013	0.0791720
N378	001	011	1974	13.0	9.30	0.0490478	0.0613416
N378	001	012	1974	15.9	9.80	0.0729428	0.0923723
N378	002	001	1974	14.4	10.40	0.0725650	0.0866167
N378	002	002	1974	15.9	10.30	0.0798478	0.0948933
N378	002	003	1974	13.7	10.75	0.0638125	0.0781381
N378	002	004	1974	13.8	10.75	0.0640169	0.0772282
N378	002	005	1974	15.2	11.40	0.0820903	0.1023093
N378	002	006	1974	15.5	10.20	0.0721613	0.0848867
N378	002	007	1974	13.2	9.30	0.0575542	0.0702078
N378	002	008	1974	13.4	9.70	0.0569031	0.0678400
N378	002	009	1974	10.3	8.40	0.0296672	0.0358032
N378	002	010	1974	9.5	7.65	0.0227671	0.0275770
N378	002	011	1974	10.1	7.85	0.0226699	0.0301455
N378	002	012	1974	8.9	7.90	0.0201946	0.0251520
N378	003	001	1974	14.8	9.10	0.0713749	0.0830825
N378	003	002	1974	14.5	9.60	0.0681177	0.0828139
N378	003	003	1974	13.4	8.20	0.0520120	0.0613388
N378	003	004	1974	14.0	10.50	0.0668182	0.0785007
N378	003	005	1974	8.2	7.40	0.0174930	0.0226063
N378	003	006	1974	9.1	6.85	0.0191337	0.0239369
N378	003	007	1974	9.2	7.10	0.0219213	0.0273609
N378	003	008	1974	8.9	6.65	0.0186566	0.0226006
N378	003	009	1974	11.8	9.20	0.0428318	0.0530580
N378	003	010	1974	13.0	7.90	0.0406125	0.0490916

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N378	003	011	1974	11.1	7.90	0.0312321	0.0376705
N378	003	012	1974	11.3	7.25	0.0320292	0.0378055
N378	005	003	1976	16.5	12.40	0.1035354	0.1302435
N378	005	005	1976	17.3	10.60	0.0964298	0.1178994
N378	005	006	1976	18.4	15.00	0.1404345	0.1672736
N378	005	007	1976	15.5	12.25	0.1039146	0.1222131
N378	005	009	1976	16.7	13.00	0.1251797	0.1478138
N378	005	011	1976	16.3	13.76	0.1227769	0.1402468
N378	005	016	1976	17.5	14.82	0.1419511	0.1673178
N378	005	019	1976	16.2	14.30	0.0998704	0.1224914
N378	005	022	1976	15.7	13.09	0.1075520	0.1275331
N378	005	031	1976	17.0	11.00	0.1050158	0.1241995
N378	006	001	1976	25.2	12.40	0.2419515	0.2793365
N378	006	009	1976	22.6	12.20	0.2056783	0.2355861
N378	006	010	1976	17.5	11.60	0.1082858	0.1322473
N378	006	020	1976	24.9	13.40	0.2487876	0.2854366
N378	006	021	1976	18.7	12.90	0.1397197	0.1603620
N378	006	026	1976	21.9	13.80	0.1924126	0.2242431
N378	006	033	1976	17.0	12.35	0.1180894	0.1382231
N378	006	035	1976	19.8	12.22	0.1482878	0.1854823
N378	006	037	1976	25.0	15.30	0.2606897	0.2935770
N378	007	001	1976	19.0	15.10	0.1567458	0.1910834
N378	007	006	1976	18.6	10.70	0.1298368	0.1521676
N378	007	007	1976	22.0	12.25	0.1774923	0.2041481
N378	007	011	1976	20.0	14.15	0.1685960	0.1931790
N378	007	017	1976	19.7	13.10	0.1640315	0.1993885
N378	007	021	1976	17.3	11.44	0.1097152	0.1297323
N378	007	025	1976	19.5	13.20	0.1694323	0.1920831
N378	007	026	1976	15.9	12.50	0.1017058	0.1206035
N378	007	027	1976	16.0	10.87	0.1001041	0.1177184
N378	007	042	1976	19.5	12.55	0.1530398	0.1880020
N378	008	002	1976	22.0	11.45	0.1969109	0.2249552
N378	008	008	1976	19.8	12.90	0.1629585	0.1928999
N378	008	014	1976	17.4	14.02	0.1411572	0.1613351
N378	008	016	1976	18.4	14.60	0.1701362	0.1915430
N378	008	017	1976	17.9	12.90	0.1369598	0.1665031
N378	008	022	1976	21.5	12.85	0.1846928	0.2169827
N378	008	028	1976	17.2	12.00	0.1409649	0.1583304
N378	008	031	1976	20.4	13.30	0.1782250	0.2073724
N378	008	037	1976	18.6	13.58	0.1488576	0.1758778
N378	008	039	1976	19.6	13.20	0.1627694	0.1951708
N378	001	001	1978	28.8	15.20	0.3227898	0.3854977
N378	001	021	1978	22.2	16.50	0.2558069	0.2951204
N378	001	020	1978	22.5	15.90	0.2483631	0.2811870
N378	001	100	1978	28.5	16.00	0.3426507	0.4052038
N378	001	101	1978	18.9	14.50	0.1716424	0.1967655
N378	001	103	1978	24.5	15.40	0.2789380	0.3149546
N378	002	004	1978	24.6	15.60	0.2685913	0.3267747
N378	002	019	1978	29.7	18.45	0.4976584	0.5714847
N378	002	100	1978	26.9	16.10	0.3659099	0.4336343
N378	002	101	1978	25.8	17.00	0.3287461	0.3790523
N378	002	102	1978	19.9	15.60	0.2063515	0.2335779
N378	002	103	1978	19.1	16.00	0.1866979	0.2167153

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N378	003	001	1978	22.0	15.90	0.2668442	0.2995417
N378	003	003	1978	27.1	16.40	0.3305139	0.3824348
N378	003	009	1978	28.0	19.80	0.4416448	0.5034354
N378	003	011	1978	26.0	16.90	0.3300523	0.4003004
N378	003	022	1978	21.1	15.60	0.2169139	0.2534674
N378	003	100	1978	23.6	17.80	0.2921718	0.3257068
N378	004	022	1978	29.0	15.80	0.3245582	0.3748153
N378	004	025	1978	21.7	17.00	0.2755327	0.3093842
N378	004	031	1978	27.7	19.10	0.4180573	0.4873463
N378	004	032	1978	25.0	14.90	0.2467783	0.2953836
N378	004	100	1978	22.1	15.40	0.2105831	0.2533664
N378	004	101	1978	20.3	17.10	0.1962693	0.2281103
N378	009	001	1978	16.6	10.80	0.1075088	0.1220708
N378	009	026	1978	16.2	14.20	0.1276952	0.1443929
N378	009	032	1978	16.7	14.35	0.1306604	0.1509556
N378	009	035	1978	19.7	13.95	0.1495362	0.1760887
N378	009	042	1978	20.8	12.05	0.1462079	0.1736147
N378	009	044	1978	20.8	14.23	0.1778944	0.2078401
N378	010	002	1978	27.5	16.20	0.3395343	0.3919389
N378	010	007	1978	26.8	16.50	0.3664759	0.4112480
N378	010	018	1978	16.3	10.45	0.0825072	0.0964626
N378	010	024	1978	16.0	12.40	0.1133372	0.1345209
N378	010	029	1978	27.8	14.25	0.2863284	0.3234020
N378	010	036	1978	17.7	11.75	0.1187231	0.1320743
N378	011	011	1978	16.8	15.20	0.1468367	0.1676432
N378	011	014	1978	21.1	14.50	0.2201625	0.2532775
N378	011	026	1978	23.0	16.50	0.2430798	0.2730920
N378	011	028	1978	16.6	14.70	0.1388907	0.1527936
N378	011	040	1978	21.0	14.80	0.2046603	0.2300557
N378	011	042	1978	15.7	11.40	0.0911068	0.1049546
N378	012	006	1978	14.5	12.50	0.0995551	0.1099262
N378	012	010	1978	13.3	12.80	0.0780344	0.0868011
N378	012	015	1978	20.1	14.70	0.1665083	0.2016211
N378	012	019	1978	22.0	14.70	0.2392928	0.2686499
N378	012	030	1978	20.2	16.90	0.2136568	0.2429844
N378	012	034	1978	13.8	12.50	0.0931845	0.1013417
N379	001	009	1977	28.4	24.30	0.5651876	0.6873497
N379	001	013	1977	37.0	24.80	0.9229510	1.1109803
N379	002	006	1977	31.2	26.00	0.7263490	0.8507557
N379	002	014	1977	35.1	26.00	1.0236874	1.1724775
N379	002	017	1977	35.3	27.70	0.9998239	1.1736231
N379	003	011	1977	31.3	26.10	0.7847184	0.8908819
N379	003	020	1977	38.9	28.60	1.2694545	1.4525321
N379	003	021	1977	37.4	26.30	1.0284381	1.2233956
N379	004	011	1977	35.9	26.10	0.9876620	1.1133051
N379	004	026	1977	36.3	27.40	0.9442626	1.1104591
N379	004	029	1977	32.5	26.10	0.8405980	0.9653231
N379	005	001	1977	28.2	23.10	0.5644016	0.6696903
N379	005	008	1977	33.7	24.90	0.7749541	0.9760264
N379	005	013	1977	35.0	25.60	0.9678981	1.1357727
N379	006	012	1977	30.0	20.20	0.6974454	0.8068717
N379	006	013	1977	38.6	23.70	1.0427485	1.2036593
N379	006	028	1977	37.8	23.70	1.0174289	1.2316301

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N379	007	002	1977	28.5	19.60	0.5090164	0.6064215
N379	007	008	1977	35.1	25.40	0.9577699	1.0960126
N379	007	015	1977	30.7	24.00	0.6474718	0.7687390
N379	008	007	1977	36.7	29.20	1.0432973	1.2090173
N379	008	018	1977	33.0	26.30	0.8518031	0.9874158
N379	008	023	1977	35.3	24.00	0.9470806	1.1168175
N379	009	001	1977	33.7	26.80	0.9712622	1.1450882
N379	009	003	1977	32.1	27.40	0.7426417	0.8919803
N379	009	004	1977	38.1	26.70	1.0125449	1.1684182
N379	010	012	1977	34.8	27.70	0.8903178	1.0484476
N379	010	014	1977	30.3	22.80	0.6437868	0.7483262
N379	010	031	1977	35.6	25.00	0.9332664	1.0871296
N379	011	001	1977	42.6	28.10	1.2688160	1.4870303
N379	011	014	1977	31.0	28.50	0.7295499	0.8540123
N379	011	019	1977	41.6	24.70	1.3137114	1.5723529
N379	012	009	1977	29.5	21.10	0.5683141	0.6848589
N379	012	018	1977	33.0	25.90	0.7573056	0.9242127
N379	012	019	1977	33.4	27.50	0.7816600	0.9387496
N379	001	013	1978	38.7	26.00	1.0129347	1.2334266
N379	001	029	1978	34.6	24.30	0.9280845	1.0936797
N379	001	030	1978	44.2	27.80	1.5504761	1.8313146
N379	002	006	1978	31.7	26.70	0.8126953	0.9408730
N379	002	007	1978	36.9	28.80	1.1190491	1.3496087
N379	002	014	1978	36.4	25.50	1.0976620	1.2922714
N379	002	017	1978	35.6	28.60	1.0826323	1.2822397
N379	003	004	1978	37.4	26.90	1.1021612	1.2779565
N379	003	005	1978	30.5	24.70	0.7527769	0.8558667
N379	003	011	1978	31.5	27.10	0.8276463	0.9167545
N379	003	012	1978	33.8	27.90	0.8991119	1.0917902
N379	003	016	1978	35.8	27.10	1.0182500	1.2076383
N379	003	021	1978	37.9	28.20	1.1671169	1.3560398
N379	004	006	1978	35.2	26.60	0.9971298	1.1533351
N379	004	011	1978	37.3	26.40	1.0299306	1.2241197
N379	004	026	1978	38.0	28.40	1.0669346	1.2458234
N379	004	029	1978	33.5	27.90	0.9788084	1.0857940
N379	005	001	1978	30.5	22.30	0.5893189	0.7326206
N379	005	013	1978	35.7	26.80	1.0493796	1.2229619
N379	005	023	1978	40.8	25.40	1.1673913	1.3928657
N379	006	001	1978	32.7	26.50	0.7498504	0.9143105
N379	006	012	1978	31.2	27.80	0.8031192	0.9273378
N379	006	013	1978	40.4	25.20	1.1463280	1.4011319
N379	006	028	1978	38.7	29.60	1.1535676	1.4569099
N379	007	001	1978	35.0	29.70	0.9743296	1.1778703
N379	007	008	1978	35.3	27.30	1.0220280	1.1898432
N379	007	009	1978	29.5	25.00	0.6418957	0.7685318
N379	007	015	1978	30.7	27.10	0.7071164	0.8375962
N379	007	022	1978	40.5	29.20	1.2770336	1.4903610
N379	007	023	1978	37.7	27.80	1.0715127	1.2962444
N379	007	026	1978	41.0	26.70	1.2756155	1.5051227
N379	008	003	1978	37.3	29.90	1.1943257	1.3757055
N379	008	012	1978	38.8	25.90	1.1791165	1.3469322
N379	008	018	1978	35.2	27.90	1.0591474	1.2236495
N379	008	023	1978	33.0	24.50	0.7908509	0.9391245

Appendix 8. Summary of sectionally measured trees for
(cont.) Golden Downs.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N379	009	001	1978	33.9	28.30	1.0553856	1.2391739
N379	009	003	1978	33.2	28.70	0.7920382	0.9564780
N379	009	004	1978	39.0	27.00	1.0765758	1.2584517
N379	009	035	1978	35.7	29.00	1.0269189	1.2056048
N379	010	001	1978	38.4	25.70	1.0753696	1.2772088
N379	010	012	1978	35.3	28.80	0.9942465	1.1809931
N379	010	014	1978	31.0	23.70	0.7019371	0.8195118
N379	010	031	1978	36.3	27.20	1.0547054	1.2328656
N379	011	001	1978	43.5	29.80	1.3837276	1.6066332
N379	011	004	1978	32.6	26.00	0.7950486	0.9394112
N379	011	006	1978	38.5	28.10	1.2074430	1.3927045
N379	011	019	1978	43.0	30.00	1.5254085	1.8287435
N379	012	005	1978	32.3	23.60	0.6840519	0.8376808
N379	012	009	1978	30.1	22.60	0.6430328	0.7637887
N379	012	018	1978	34.1	26.70	0.8152136	1.0150142
N379	012	019	1978	34.0	28.10	0.8330455	1.0086775

Appendix 9. Stand volume data for Golden Downs.

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N262	001	1973	188.8	229.6	1481.	33.8	10.0	16.3
N262	002	1973	161.8	193.3	1481.	31.8	10.0	14.2
N262	003	1973	120.4	146.4	1481.	23.9	10.0	14.6
N262	004	1973	121.9	150.8	1481.	29.4	10.0	12.7
N262	005	1973	129.0	159.8	1481.	26.6	10.0	14.5
N262	006	1973	180.8	217.9	1481.	36.2	10.0	14.2
N261	001	1973	812.9	991.5	396.	68.9	48.0	41.6
N261	002	1973	934.0	1105.8	309.	62.3	48.0	46.3
N261	003	1973	771.8	918.1	346.	63.7	48.0	40.4
N261	004	1973	965.8	1131.5	371.	73.4	48.0	42.8
N261	005	1973	925.5	1094.8	371.	70.7	48.0	42.2
N261	006	1973	919.5	1101.5	396.	73.1	48.0	45.0
N386	001	1976	13.8	16.5	378.	4.0	8.2	7.8
N386	002	1976	13.0	15.6	411.	3.9	8.2	7.7
N386	003	1976	12.8	14.5	422.	3.9	8.2	7.8
N386	004	1976	11.9	15.5	422.	3.7	8.2	7.4
N386	005	1976	11.2	14.4	367.	3.3	8.2	7.4
N386	006	1976	11.0	13.1	400.	3.3	8.2	7.7
N386	007	1976	11.6	13.6	356.	3.4	8.2	7.2
N386	008	1976	10.9	12.7	356.	3.2	8.2	6.9
N386	009	1976	7.4	8.9	333.	2.5	8.2	7.7
N386	010	1976	7.0	8.4	344.	2.4	8.2	6.6
N386	011	1976	7.5	9.0	311.	2.5	8.2	8.0
N386	012	1976	7.4	8.8	344.	2.5	8.2	6.8
N386	001	1980	61.8	74.6	378.	12.5	12.0	12.4
N386	002	1980	65.2	80.4	411.	14.6	12.0	12.6
N386	003	1980	67.5	83.0	422.	14.4	12.0	13.8
N386	004	1980	63.1	77.1	411.	15.6	12.0	12.4
N386	005	1980	56.3	70.1	367.	13.7	12.0	11.4
N386	006	1980	53.0	65.8	400.	13.0	12.0	13.0
N386	007	1980	47.4	58.3	356.	11.1	12.0	13.3
N386	008	1980	55.1	67.3	344.	13.0	12.0	11.5
N386	009	1980	46.1	55.3	333.	10.4	12.0	13.6
N386	010	1980	42.2	53.1	344.	9.2	12.0	12.8
N386	011	1980	47.5	58.7	311.	9.7	12.0	14.4
N386	012	1980	39.8	50.3	344.	8.8	12.0	12.4
N378	001	1974	21.9	26.6	333.	5.7	7.0	10.1
N378	002	1974	19.3	25.4	333.	5.1	7.0	10.5
N378	003	1974	19.4	24.0	367.	5.2	7.0	10.8
N378	004	1974	17.6	21.4	367.	4.8	7.0	10.0
N378	005	1974	23.9	29.0	467.	6.0	7.0	9.4
N378	006	1974	21.5	26.1	422.	5.4	7.0	9.0
N378	007	1974	24.3	29.5	478.	6.1	7.0	9.9
N378	008	1974	24.0	29.2	456.	6.0	7.0	10.5
N378	009	1974	15.4	18.7	511.	4.5	7.0	7.7
N378	010	1974	16.0	19.3	456.	4.5	7.0	8.7
N378	011	1974	17.9	21.6	489.	5.0	7.0	8.4
N378	012	1974	15.8	19.3	511.	4.6	7.0	8.7
N378	005	1976	62.8	75.1	467.	12.4	9.2	13.7
N378	006	1976	74.6	86.6	400.	14.8	9.2	12.8
N378	007	1976	75.9	89.2	467.	14.8	9.2	13.5
N378	008	1976	80.7	94.1	456.	15.2	9.2	14.5
N378	001	1978	97.1	113.3	333.	17.5	11.0	16.5

Appendix 9. Stand volume data for Golden Downs.
(cont.)

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N378	002	1978	109.0	127.1	333.	16.7	11.0	17.7
N378	003	1978	107.3	123.4	367.	16.5	11.0	17.9
N378	004	1978	102.7	119.6	367.	17.4	11.0	16.9
N378	009	1978	76.4	89.3	511.	15.4	11.0	13.9
N378	010	1978	95.7	109.2	456.	17.8	11.0	15.0
N378	011	1978	91.2	103.2	489.	15.2	11.0	14.4
N378	012	1978	85.7	97.7	511.	14.1	11.0	14.9
N379	001	1977	235.6	284.6	310.	27.1	18.2	25.4
N379	002	1977	240.3	279.9	280.	24.1	18.2	25.9
N379	003	1977	268.3	309.2	290.	26.7	18.2	25.9
N379	004	1977	317.1	363.9	360.	32.0	18.2	27.4
N379	005	1977	272.6	328.8	330.	29.0	18.2	25.6
N379	006	1977	276.2	323.5	330.	29.4	18.2	27.4
N379	007	1977	270.2	312.0	320.	28.3	18.2	27.1
N379	008	1977	241.1	281.0	260.	24.5	18.2	26.0
N379	009	1977	298.4	354.4	350.	30.2	18.2	27.2
N379	010	1977	232.0	270.8	310.	25.4	18.2	26.5
N379	011	1977	191.4	225.8	190.	20.3	18.2	26.3
N379	012	1977	220.8	266.9	320.	25.4	18.2	25.0
N379	001	1978	266.2	318.3	310.	29.0	19.0	26.1
N379	002	1978	272.5	320.7	280.	25.9	19.0	27.2
N379	003	1978	271.4	316.4	270.	26.6	19.0	28.3
N379	004	1978	349.2	398.1	350.	33.5	19.0	28.6
N379	005	1978	271.1	324.5	310.	29.5	19.0	27.1
N379	006	1978	300.4	364.0	330.	31.4	19.0	27.4
N379	007	1978	299.6	355.7	320.	30.5	19.0	28.1
N379	008	1978	271.2	314.1	260.	26.4	19.0	27.6
N379	009	1978	333.3	394.6	350.	32.5	19.0	28.2
N379	010	1978	267.8	314.7	310.	27.5	19.0	27.1
N379	011	1978	217.6	255.4	190.	21.9	19.0	27.4
N379	012	1978	245.4	300.1	320.	27.6	19.0	25.9

Appendix 10. Data for diameter distributions in Golden Downs.

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N262	001	1969	5.3	10.21	5.02	148.	11.2	7.6	3.26	0	0	0	1.6
N262	001	1970	6.6	12.29	6.29	148.	11.8	3.7	3.26	0	0	0	1.6
N262	001	1971	7.9	14.08	8.44	148.	12.4	0.8	3.26	0	0	0	1.6
N262	001	1972	8.4	15.52	11.93	148.	12.9	4.9	3.26	0	0	0	1.6
N262	001	1973	8.9	16.60	14.64	148.	13.3	81.0	3.26	0	0	0	1.6
N262	001	1974	15.7	20.41	6.89	34.	61.1	51.1	3.26	0	0	0	1.6
N262	001	1975	17.8	22.66	7.59	34.	61.4	11.2	3.26	0	0	0	1.6
N262	002	1969	3.0	8.27	6.08	148.	1.8	7.6	93.06	26	91	1200	0.6
N262	002	1970	5.1	11.15	7.58	148.	11.5	3.7	93.06	26	91	1200	0.6
N262	002	1971	6.4	13.33	10.45	148.	12.1	9.8	93.06	26	91	1200	0.6
N262	002	1972	7.4	15.06	14.44	148.	12.8	0.9	93.06	26	91	1200	0.6
N262	002	1973	7.6	16.02	16.79	148.	13.1	81.0	93.06	26	91	1200	0.6
N262	002	1974	18.0	20.24	2.03	34.	61.1	21.1	93.06	26	91	1200	0.6
N262	002	1975	20.3	22.41	2.22	34.	61.3	71.2	93.06	26	91	1200	0.6
N262	003	1969	1.5	7.52	6.22	148.	1.7	3.6	·3.02	0	0	0	0.6
N262	003	1970	2.5	9.64	8.22	148.	11.1	8.7	3.02	0	0	0	0.6
N262	003	1971	3.0	11.39	10.62	148.	11.6	3.8	3.02	0	0	0	0.6
N262	003	1972	3.6	12.82	13.54	148.	12.0	7.9	3.02	0	0	0	0.6
N262	003	1973	4.1	13.79	15.49	148.	12.3	91.0	3.02	0	0	0	0.6
N262	003	1974	16.3	18.70	1.77	37.	1.0	21.1	3.02	0	0	0	0.6
N262	003	1975	17.8	20.53	2.34	37.	1.2	31.2	3.02	0	0	0	0.6
N262	004	1969	3.3	7.04	3.60	148.	1.6	2.6	92.79	26	91	1200	2.6
N262	004	1970	5.3	10.20	4.57	148.	11.2	6.7	92.79	26	91	1200	2.6
N262	004	1971	7.1	12.77	6.20	148.	11.9	7.8	92.79	26	91	1200	2.6
N262	004	1972	8.1	14.39	8.20	148.	12.5	0.9	92.79	26	91	1200	2.6
N262	004	1973	9.1	15.59	9.54	148.	12.9	41.0	92.79	26	91	1200	2.6
N262	004	1974	17.0	19.69	3.75	39.	51.2	11.1	92.79	26	91	1200	2.6
N262	004	1975	19.1	22.19	5.02	39.	51.5	41.2	92.79	26	91	1200	2.6
N262	005	1969	3.3	8.36	5.17	148.	1.8	7.6	2.97	0	0	0	0.6
N262	005	1970	4.8	10.42	6.24	148.	11.3	3.7	2.97	0	0	0	0.6
N262	005	1971	5.8	12.24	8.33	148.	11.8	4.8	2.97	0	0	0	0.6
N262	005	1972	6.4	13.70	11.02	148.	12.3	1.9	2.97	‘0	0	0	0.6
N262	005	1973	6.6	14.71	12.54	148.	12.6	61.0	2.97	0	0	0	0.6
N262	005	1974	16.8	20.02	4.38	32.	11.0	1.1	2.97	0	0	0	0.6
N262	005	1975	18.3	22.29	5.83	32.	11.2	41.2	2.97	0	0	0	0.6
N262	006	1969	4.1	9.14	5.43	148.	11.0	3.6	92.97	26	91	1200	5.6
N262	006	1970	6.4	11.95	6.43	148.	11.7	4.7	92.97	26	91	1200	5.6
N262	006	1971	7.6	14.40	9.24	148.	12.5	2.8	92.97	26	91	1200	5.6
N262	006	1972	8.4	16.11	12.74	148.	13.1	7.9	92.97	26	91	1200	5.6
N262	006	1973	8.9	17.22	14.60	148.	13.6	21.0	92.97	26	91	1200	5.6
N262	006	1974	17.8	21.36	5.76	34.	61.2	51.1	92.97	26	91	1200	5.6
N262	006	1975	19.6	23.54	7.07	34.	61.5	21.2	92.97	26	’911200		5.6
N261	001	1969	18.5	42.66	164.56	40.	86.3	44.4	92.62	26	91	1200	44.4
N261	001	1971	18.5	43.78	185.75	40.	86.7	24.5	92.62	26	91	1200	44.4
N261	001	1972	18.5	44.05	191.49	40.	86.8	14.7	92.62	26	91	1200	44.4
N261	001	1973	18.5	45.05	195.46	39.	66.8	94.8	92.62	26	91	1200	44.4
N261	002	1969	27.7	46.96	133.88	30.	95.6	74.4	92.62	26	91	1200	44.4
N261	002	1971	27.9	48.33	155.24	30.	96.0	34.6	92.62	26	91	1200	44.4
N261	002	1972	27.9	48.55	158.36	30.	96.0	94.7	92.62	26	91	1200	44.4
N261	002	1973	27.9	49.04	168.92	30.	96.2	34.8	92.62	26	91	1200	44.4
N261	003	1969	27.9	45.17	125.23	34.	65.8	74.4	2.62	0	0	0	44.4
N261	003	1970	27.9	45.76	134.44	34.	66.0	44.5	2.62	0	0	0	44.4
N261	003	1971	27.9	46.20	137.17	34.	66.1	64.6	2.62	0	0	0	44.4

Appendix 10. Data for diameter distributions in Golden Downs.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N261	003	1972	27.9	46.57	144.60	34.	66.2	74.7	2.62	0	0	0	44.4
N261	003	1973	27.9	46.87	151.98	34.	66.3	74.8	2.62	0	0	0	44.4
N261	004	1969	34.5	47.99	61.74	38.	37.1	14.4	92.62	26	911200		44.4
N261	004	1971	34.8	48.69	64.19	37.	17.0	84.6	92.62	26	911200		44.4
N261	004	1972	34.8	49.11	67.36	37.	17.2	14.7	92.62	26	911200		44.4
N261	004	1973	34.8	49.52	70.84	37.	17.3	44.8	92.62	26	911200		44.4
N261	005	1969	20.8	46.27	128.15	37.	16.6	4.4	2.62	0	0	0	44.4
N261	005	1970	20.8	46.77	131.88	37.	16.7	44.5	2.62	0	0	0	44.4
N261	005	1971	20.8	47.37	139.37	37.	16.9	34.6	2.62	0	0	0	44.4
N261	005	1972	20.8	47.55	142.86	37.	16.9	94.7	2.62	0	0	0	44.4
N261	005	1973	20.8	47.81	146.95	37.	17.0	74.8	2.62	0	0	0	44.4
N261	006	1969	31.2	46.01	87.12	39.	66.8	44.4	2.62	0	0	0	44.4
N261	006	1970	31.2	46.73	93.10	39.	67.0	64.5	2.62	0	0	0	44.4
N261	006	1971	31.5	47.28	97.87	39.	67.2	44.6	2.62	0	0	0	44.4
N261	006	1972	31.5	47.49	101.43	39.	67.3	14.7	2.62	0	0	0	44.4
N261	006	1973	31.5	48.32	101.54	38.	37.3	24.8	2.62	0	0	0	44.4
N378	001	1974	9.8	14.60	4.19	33.	3.5	7.7	3.13	30	0	0	8.7
N378	001	1975	13.3	19.00	6.32	33.	3.9	6.8	3.13	30	0	0	8.7
N378	001	1976	14.6	22.13	8.10	33.	31.3	0.9	3.13	30	0	0	8.7
N378	001	1977	15.6	24.03	8.78	33.	31.5	31.0	3.13	30	0	0	8.7
N378	001	1978	17.2	25.69	8.74	33.	31.7	51.1	3.13	30	0	0	8.7
N378	001	1979	18.5	28.27	11.35	225.	61.6	31.2	3.13	130	0	0	81.1
N378	001	1980	19.8	31.52	15.69	225.	62.0	21.3	3.13	130	0	0	81.1
N378	001	1981	20.7	33.92	19.74	225.	62.3	51.4	3.13	130	0	0	81.1
N378	002	1974	10.5	13.84	2.92	33.	3.5	1.7	3.20	20	0	0	7.7
N378	002	1975	14.5	18.14	4.79	33.	3.8	7.8	3.20	20	0	0	7.7
N378	002	1976	17.5	21.40	5.70	33.	31.2	1.9	3.20	20	0	0	7.7
N378	002	1977	19.0	23.45	6.72	33.	31.4	61.0	3.20	20	0	0	7.7
N378	002	1978	20.3	25.09	7.90	33.	31.6	71.1	3.20	20	0	0	7.7
N378	002	1979	22.1	27.40	9.56	225.	61.5	31.2	3.20	120	0	0	71.1
N378	002	1980	24.5	30.44	11.47	225.	61.8	81.3	3.20	120	0	0	71.1
N378	002	1981	25.7	32.42	13.75	225.	62.1	41.4	3.20	120	0	0	71.1
N378	003	1974	12.0	13.42	1.17	36.	7.5	2.7	3.21	0	0	0	4.7
N378	003	1975	14.8	17.10	2.08	36.	7.8	5.8	3.21	0	0	0	4.7
N378	003	1976	17.6	20.10	2.58	36.	71.1	7.9	3.21	0	0	0	4.7
N378	003	1977	19.1	22.08	2.75	36.	71.4	11.0	3.21	0	0	0	4.7
N378	003	1978	20.4	23.89	3.52	36.	71.6	51.1	3.21	0	0	0	4.7
N378	003	1979	24.4	26.97	4.11	226.	71.5	31.2	3.21	0	0	0	41.1
N378	003	1980	26.8	29.65	4.94	226.	71.8	51.3	3.21	0	0	0	41.1
N378	003	1981	28.6	31.65	5.92	226.	72.1	11.4	3.21	0	0	0	41.1
N378	004	1974	10.7	12.88	1.73	36.	7.4	8.7	3.12	10	0	0	0.7
N378	004	1975	14.2	17.21	3.90	36.	7.8	6.8	3.12	10	0	0	0.7
N378	004	1976	16.4	20.43	6.14	36.	71.2	2.9	3.12	10	0	0	0.7
N378	004	1977	18.1	22.53	7.08	36.	71.4	81.0	3.12	10	0	0	0.7
N378	004	1978	18.5	24.40	7.83	36.	71.7	41.1	3.12	10	0	0	0.7
N378	004	1979	23.1	27.35	7.16	226.	71.5	81.2	3.12	110	0	0	1.1
N378	004	1980	26.2	30.35	8.16	226:	71.9	51.3	3.12	110	0	0	1.1
N378	004	1981	28.0	32.52	9.55	226.	72.2	31.4	3.12	110	0	0	1.1
N378	004	1982	29.4	34.27	10.37	226.	72.4	81.5	3.12	110	0	0	1.1
N378	005	1974	10.8	12.77	1.53	46.	7.6	0.7	3.05	0	0	0	2.7
N378	005	1975	13.1	15.64	2.46	46.	7.9	1.8	3.05	0	0	0	2.7
N378	005	1976	13.1	18.28	3.98	46.	71.2	4.9	3.05	0	0	0	2.7
N378	005	1977	19.0	21.60	2.33	26.	7.9	81.0	3.05	0	0	0	2.7

Appendix 10. Data for diameter distributions in Golden Downs.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N378	005	1978	21.0	23.72	2.58	26.	71.1	81.1	3.05	0	0	0	2.7
N378	005	1979	22.6	26.04	3.09	226.	71.4	31.2	3.05	0	0	0	21.1
N378	005	1980	24.9	28.45	3.86	226.	71.7	1.3	3.05	0	0	0	21.1
N378	005	1981	26.0	30.22	4.95	226.	71.9	21.4	3.05	0	0	0	21.1
N378	005	1982	27.2	31.75	5.40	226.	72.1	21.5	3.05	0	0	0	21.1
N378	006	1974	9.7	12.74	1.80	42.	2.5	4.7	3.10	20	0	0	3.7
N378	006	1975	13.7	17.59	3.70	40.	0.9	8.8	3.10	20	0	0	3.7
N378	006	1976	16.8	21.60	5.57	40.	1.4	8.9	3.10	20	0	0	3.7
N378	006	1977	19.2	24.60	6.09	26.	71.2	81.0	3.10	20	0	0	3.7
N378	006	1978	21.0	26.59	5.96	26.	71.4	91.1	3.10	20	0	0	3.7
N378	006	1979	23.4	29.19	6.68	226.	71.8	1.2	3.10	120	0	0	31.1
N378	006	1980	26.2	32.12	7.79	226.	72.1	81.3	3.10	120	0	0	31.1
N378	006	1981	28.6	34.11	8.30	226.	72.4	51.4	3.10	120	0	0	31.1
N378	006	1982	29.8	35.68	9.81	226.	72.6	91.5	3.10	120	0	0	31.1
N378	007	1974	10.6	12.73	1.24	47.	8.6	1.7	3.10	10	0	0	3.7
N378	007	1975	13.2	16.50	2.23	47.	81.0	3.8	3.10	10	0	0	3.7
N378	007	1976	15.5	19.97	3.85	46.	71.4	7.9	3.10	10	0	0	3.7
N378	007	1977	20.8	23.55	2.35	26.	71.1	71.0	3.10	10	0	0	3.7
N378	007	1978	22.5	25.56	3.21	26.	71.3	71.1	3.10	10	0	0	3.7
N378	007	1979	24.7	28.05	4.40	226.	71.6	61.2	3.10	110	0	0	31.1
N378	007	1980	27.0	30.73	5.86	226.	71.9	91.3	3.10	110	0	0	31.1
N378	007	1981	28.2	32.69	7.85	226.	72.2	51.4	3.10	110	0	0	31.1
N378	007	1982	29.4	34.17	9.05	226.	72.4	61.5	3.10	110	0	0	31.1
N378	008	1974	10.0	12.89	1.77	45.	6.6	0.7	3.20	30	0	0	7.7
N378	008	1975	13.6	17.01	2.79	45.	61.0	4.8	3.20	30	0	0	7.7
N378	008	1976	16.7	20.49	4.07	45.	61.5	2.9	3.20	30	0	0	7.7
N378	008	1977	21.9	24.11	2.37	26.	71.2	21.0	3.20	30	0	0	7.7
N378	008	1978	23.4	26.32	3.21	26.	71.4	61.1	3.20	30	0	0	7.7
N378	008	1979	25.4	28.81	3.87	226.	71.7	51.2	3.20	130	0	0	71.1
N378	008	1980	27.5	31.68	5.50	226.	72.1	11.3	3.20	130	0	0	71.1
N378	008	1981	29.0	33.99	7.04	226.	72.4	31.4	3.20	130	0	0	71.1
N378	008	1982	30.2	35.75	8.60	226.	72.6	91.5	3.20	130	0	0	71.1
N378	009	1974	8.6	10.58	0.81	51.	1.4	5.7	2.67	20	0	0	3.7
N378	009	1975	10.4	13.29	1.46	51.	1.7	1.8	2.67	20	0	0	3.7
N378	009	1976	12.2	15.90	2.05	51.	11.0	2.9	2.67	20	0	0	3.7
N378	009	1977	13.8	17.81	2.84	51.	11.2	81.0	2.67	20	0	0	3.7
N378	009	1978	15.4	19.52	3.63	51.	11.5	41.1	2.67	20	0	0	3.7
N378	009	1979	20.9	23.40	2.18	226.	71.1	51.2	2.67	120	0	0	31.1
N378	009	1980	23.9	26.51	2.69	226.	71.4	81.3	2.67	120	0	0	31.1
N378	009	1981	26.3	28.98	3.31	226.	71.7	71.4	2.67	120	0	0	31.1
N378	009	1982	27.8	30.77	4.22	226.	71.9	91.5	2.67	120	0	0	31.1
N378	010	1974	5.6	10.98	4.75	45.	6.4	5.7	2.87	30	0	0	9.7
N378	010	1975	8.8	14.69	6.75	45.	6.8	0.8	2.87	30	0	0	9.7
N378	010	1976	11.7	18.16	9.42	45.	61.2	1.9	2.87	30	0	0	9.7
N378	010	1977	13.3	20.30	11.15	45.	61.5	11.0	2.87	30	0	0	9.7
N378	010	1978	14.6	22.02	12.59	45.	61.7	81.1	2.87	30	0	0	9.7
N378	010	1979	21.0	24.80	5.47	226.	71.3	1.2	2.87	130	0	0	91.1
N378	010	1980	23.2	27.97	7.03	226.	71.6	51.3	2.87	130	0	0	91.1
N378	010	1981	24.5	30.35	9.57	226.	71.9	51.4	2.87	130	0	0	91.1
N378	011	1974	8.6	11.30	1.75	48.	9.5	0.7	2.81	10	0	0	9.7
N378	011	1975	11.6	13.90	2.37	48.	9.7	5.8	2.81	10	0	0	9.7
N378	011	1976	12.6	16.30	3.65	48.	91.0	3.9	2.81	10	0	0	9.7
N378	011	1977	14.2	18.14	4.05	48.	91.2	81.0	2.81	10	0	0	9.7

Appendix 10. Data for diameter distributions in Golden Downs.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N378	011	1978	15.7	19.75	5.15	48.	91.5	21.1	2.81	10	0	0	9.7
N378	011	1979	19.2	23.02	4.29	226.	71.1	21.2	2.81	110	0	0	91.1
N378	011	1980	21.7	25.62	4.75	226.	71.3	81.3	2.81	110	0	0	91.1
N378	011	1981	23.0	27.74	5.63	226.	71.6	21.4	2.81	110	0	0	91.1
N378	011	1982	24.4	29.56	6.33	226.	71.8	41.5	2.81	110	0	0	91.1
N378	012	1974	6.7	10.55	2.58	51.	1.4	6.7	2.85	0	0	0	8.7
N378	012	1975	9.2	12.96	3.33	51.	1.6	9.8	2.85	0	0	0	8.7
N378	012	1976	10.5	15.19	4.46	51.	1.9	4.9	2.85	0	0	0	8.7
N378	012	1977	11.9	16.95	5.57	51.	11.1	81.0	2.85	0	0	0	8.7
N378	012	1978	13.3	18.60	6.21	51.	11.4	11.1	2.85	0	0	0	8.7
N378	012	1979	18.2	21.95	4.47	226.	71.0	21.2	2.85	0	0	0	81.1
N378	012	1980	19.9	24.27	5.38	226.	71.2	41.3	2.85	0	0	0	81.1
N378	012	1981	21.9	26.43	5.92	226.	71.4	71.4	2.85	0	0	0	81.1
N378	012	1982	23.1	28.18	7.15	226.	71.6	81.5	2.85	0	0	0	81.1
N386	001	1976	8.4	11.40	3.13	237.	8.3	9.8	82.35	0	5	0	6.8
N386	001	1977	10.0	13.45	3.51	237.	8.5	5.9	82.35	0	5	0	6.8
N386	001	1978	11.5	15.53	3.85	237.	8.7	31.0	82.35	0	5	0	6.8
N386	001	1979	13.7	17.96	4.55	237.	8.9	71.1	82.35	0	5	0	6.8
N386	001	1980	15.7	20.44	4.78	237.	81.2	51.2	82.35	0	5	0	6.8
N386	002	1976	7.7	10.88	3.03	241.	1.3	9.8	82.33	20	5	0	6.8
N386	002	1977	10.3	13.62	3.35	241.	1.6	1.9	82.33	20	5	0	6.8
N386	002	1978	12.2	16.31	4.37	241.	1.8	71.0	82.33	20	5	0	6.8
N386	002	1979	14.0	18.80	4.70	241.	11.1	61.1	82.33	20	5	0	6.8
N386	002	1980	15.9	21.15	5.14	241.	11.4	61.2	82.33	20	5	0	6.8
N386	003	1976	7.7	10.68	2.94	242.	2.3	9.8	82.35	10	5	0	6.8
N386	003	1977	10.5	13.59	3.22	242.	2.6	2.9	82.35	10	5	0	6.8
N386	003	1978	12.5	16.04	5.04	242.	2.8	71.0	82.35	10	5	0	6.8
N386	003	1979	14.7	18.32	4.88	242.	21.1	31.1	82.35	10	5	0	6.8
N386	003	1980	17.0	20.68	5.18	242.	21.4	41.2	82.35	10	5	0	6.8
N386	004	1976	8.0	10.43	1.84	242.	2.3	7.8	82.27	30	5	0	3.8
N386	004	1977	10.7	13.54	2.32	242.	2.6	2.9	82.27	30	5	0	3.8
N386	004	1978	12.9	16.25	3.04	242.	2.8	91.0	82.27	30	5	0	3.8
N386	004	1979	15.4	19.36	4.07	241.	11.2	21.1	82.27	30	5	0	3.8
N386	004	1980	17.4	21.84	4.87	241.	11.5	61.2	82.27	30	5	0	3.8
N386	005	1976	8.5	10.64	2.10	236.	7.3	3.8	82.27	20	5	0	3.8
N386	005	1977	10.8	13.66	2.83	236.	7.5	5.9	82.27	20	5	0	3.8
N386	005	1978	13.0	16.47	3.58	236.	7.7	91.0	82.27	20	5	0	3.8
N386	005	1979	14.7	19.25	5.01	236.	71.0	81.1	82.27	20	5	0	3.8
N386	005	1980	16.3	21.70	5.98	236.	71.3	71.2	82.27	20	5	0	3.8
N386	006	1976	7.4	10.15	2.54	240.	0.3	3.8	82.33	10	5	0	6.8
N386	006	1977	9.5	12.94	3.25	240.	0.5	4.9	82.33	10	5	0	6.8
N386	006	1978	11.7	15.47	4.30	240.	0.7	61.0	82.33	10	5	0	6.8
N386	006	1979	13.2	17.82	5.16	240.	1.0	11.1	82.33	10	5	0	6.8
N386	006	1980	14.6	20.16	5.94	240.	1.3	1.2	82.33	10	5	0	6.8
N386	007	1976	8.2	10.97	2.15	235.	6.3	4.8	82.23	0	5	0	1.8
N386	007	1977	10.1	12.98	2.12	235.	6.4	8.9	82.23	0	5	0	1.8
N386	007	1978	11.3	14.94	2.28	235.	6.6	31.0	82.23	0	5	0	1.8
N386	007	1979	13.0	17.29	3.03	235.	6.8	41.1	82.23	0	5	0	1.8
N386	007	1980	14.7	19.82	3.88	235.	61.1	11.2	82.23	0	5	0	1.8
N386	008	1976	8.6	10.61	1.28	235.	6.3	2.8	82.16	30	5	0	5.8
N386	008	1977	10.7	13.50	1.68	235.	6.5	1.9	82.16	30	5	0	5.8
N386	008	1978	13.0	16.11	1.96	235.	6.7	31.0	82.16	30	5	0	5.8
N386	008	1979	15.7	19.39	2.93	234.	41.0	21.1	82.16	30	5	0	5.8

Appendix 10. Data for diameter distributions in Golden Downs. (cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N386	008	1980	17.9	21.81	3.36	234.	41.3	1.2	82.16	30	5	0	5.8
N386	009	1976	6.8	9.56	2.64	233.	3.2	5.8	82.33	20	5	0	6.8
N386	009	1977	9.0	12.40	2.96	233.	3.4	1.9	82.33	20	5	0	6.8
N386	009	1978	10.8	14.94	4.01	233.	3.5	91.0	82.33	20	5	0	6.8
N386	009	1979	13.0	17.45	4.53	233.	3.8	11.1	82.33	20	5	0	6.8
N386	009	1980	15.2	19.78	5.51	233.	31.0	41.2	82.33	20	5	0	6.8
N386	010	1976	7.3	9.37	1.39	234.	4.2	4.8	82.09	10	5	0	9.8
N386	010	1977	9.0	11.46	1.76	234.	4.3	6.9	82.09	10	5	0	9.8
N386	010	1978	10.9	13.72	2.20	234.	4.5	11.0	82.09	10	5	0	9.8
N386	010	1979	13.3	16.05	2.81	234.	4.7	1.1	82.09	10	5	0	9.8
N386	010	1980	15.0	18.36	3.91	234.	4.9	21.2	82.09	10	5	0.	9.8
N386	011	1976	6.5	9.88	3.43	231.	1.2	5.8	82.39	30	5	0	7.8
N386	011	1977	8.0	12.32	4.39	231.	1.3	8.9	82.39	30	5	0	7.8
N386	011	1978	10.4	14.75	5.40	231.	1.5	41.0	82.39	30	5	0	7.8
N386	011	1979	12.4	17.28	7.08	231.	1.7	51.1	82.39	30	5	0	7.8
N386	011	1980	14.3	19.72	9.00	231.	1.9	71.2	82.39	30	5	0	7.8
N386	012	1976	6.8	9.43	2.12	234.	4.2	5.8	82.14	0	5	0	3.8
N386	012	1977	7.8	11.22	2.64	234.	4.3	5.9	82.14	0	5	0	3.8
N386	012	1978	9.1	13.26	3.16	234.	4.4	81.0	82.14	0	5	0	3.8
N386	012	1979	10.8	15.55	4.20	234.	4.6	71.1	82.14	0	5	0	3.8
N386	012	1980	12.4	17.85	5.16	234.	4.8	71.2	82.14	0	5	0	3.8
N379	001	1974	20.8	27.40	16.48	632.	1.9	31.5	92.74	21	624	0	31.5
N379	001	1975	22.4	28.68	18.60	632.	2.1	11.6	92.74	21	624	0	31.5
N379	001	1976	23.0	30.96	21.35	632.	2.4	61.7	92.74	21	624	0	31.5
N379	001	1977	26.0	33.02	22.54	631.	2.7	11.8	92.74	21	624	0	31.5
N379	001	1978	27.0	34.18	25.05	631.	2.9	1.9	92.74	21	624	0	31.5
N379	001	1979	27.8	35.50	27.80	631.	3.1	32.0	92.74	21	624	0	31.5
N379	002	1974	20.4	28.44	16.82	628.	1.8	11.5	92.84	0	0	0	91.5
N379	002	1975	20.7	29.29	18.14	628.	1.9	21.6	92.84	0	0	0	91.5
N379	002	1976	21.6	31.15	21.45	628.	2.1	81.7	92.84	0	0	0	91.5
N379	002	1977	22.1	32.73	25.01	628.	2.4	11.8	92.84	0	0	0	91.5
N379	002	1978	22.2	33.89	28.49	628.	2.5	91.9	92.84	0	0	0	91.5
N379	002	1979	22.2	35.08	31.79	628.	2.7	72.0	92.84	0	0	0	91.5
N379	003	1974	21.7	29.00	14.46	629.	1.9	51.5	92.84	21	624	0	1.5
N379	003	1975	22.9	30.28	14.22	629.	2.1	21.6	92.84	21	624	0	1.5
N379	003	1976	24.3	32.35	15.24	629.	2.4	21.7	92.84	21	624	0	1.5
N379	003	1977	25.8	34.04	15.28	629.	2.6	71.8	92.84	21	624	0	1.5
N379	003	1978	26.2	35.16	16.91	627.	2.6	61.9	92.84	21	624	0	1.5
N379	003	1979	26.7	36.31	18.46	627.	2.8	32.0	92.84	21	624	0	1.5
N379	004	1974	22.2	28.66	7.49	636.	2.3	41.5	92.82	4	55	0	91.5
N379	004	1975	22.7	29.62	8.52	636.	2.5	1.6	92.82	4	55	0	91.5
N379	004	1976	23.9	31.57	10.10	636.	2.8	51.7	92.82	4	55	0	91.5
N379	004	1977	25.4	33.45	11.59	636.	3.2	1.8	92.82	4	55	0	91.5
N379	004	1978	26.0	34.73	12.65	635.	3.3	51.9	92.82	4	55	0	91.5
N379	004	1979	27.6	36.21	14.35	635.	3.6	42.0	92.82	4	55	0	91.5
N379	005	1974	22.7	28.56	13.05	633.	2.1	51.5	92.89	0	0	0	51.5
N379	005	1975	24.3	29.57	12.38	633.	2.3	1.6	92.89	0	0	0	51.5
N379	005	1976	25.8	31.51	14.40	633.	2.6	11.7	92.89	0	0	0	51.5
N379	005	1977	26.7	33.20	16.58	633.	2.9	1.8	92.89	0	0	0	51.5
N379	005	1978	27.3	34.25	17.27	631.	2.9	1.9	92.89	0	0	0	51.5
N379	005	1979	28.0	35.77	20.27	631.	3.1	62.0	92.89	0	0	0	51.5
N379	006	1974	22.0	28.61	11.62	633.	2.1	51.5	92.95	10	812	0	71.5
N379	006	1975	23.0	29.52	12.42	633.	2.2	91.6	92.95	10	812	0	71.5

Appendix 10. Data for diameter distributions in Golden Downs.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N379	006	1976	24.3	31.74	14.50	633.	2.6	51.7	92.95	10	812	0	71.5
N379	006	1977	25.6	33.46	16.75	633.	2.9	41.8	92.95	10	812	0	71.5
N379	006	1978	26.3	34.53	18.59	633.	3.1	41.9	92.95	10	812	0	71.5
N379	006	1979	27.0	35.87	22.60	633.	3.3	92.0	92.95	10	812	0	71.5
N379	007	1974	22.3	28.27	12.16	632.	2.0	41.5	92.94	10	812	0	61.5
N379	007	1975	23.4	29.26	11.84	632.	2.1	81.6	92.94	10	812	0	61.5
N379	007	1976	25.3	31.55	13.27	632.	2.5	31.7	92.94	10	812	0	61.5
N379	007	1977	27.2	33.33	14.69	632.	2.8	31.8	92.94	10	812	0	61.5
N379	007	1978	28.2	34.61	16.08	632.	3.0	51.9	92.94	10	812	0	61.5
N379	007	1979	29.0	36.04	17.87	632.	3.3	12.0	92.94	10	812	0	61.5
N379	008	1974	23.4	28.65	9.75	626.	1.7	1.5	92.84	21	624	0	1.5
N379	008	1975	23.8	29.79	11.38	626.	1.8	31.6	92.84	21	624	0	1.5
N379	008	1976	24.9	32.30	14.32	626.	2.1	61.7	92.84	21	624	0	1.5
N379	008	1977	25.7	34.40	17.17	626.	2.4	51.8	92.84	21	624	0	1.5
N378	008	1978	26.7	35.72	18.92	26.	71.4	61.1	3.20	30	0	0	7.7
N378	008	1979	27.5	37.13	20.70	226.	71.7	51.2	3.20	130	0	0	71.1
N379	009	1974	22.9	27.79	12.78	635.	2.1	61.5	92.99	10	812	0	81.5
N379	009	1975	23.5	28.90	14.69	635.	2.3	41.6	92.99	10	812	0	81.5
N379	009	1976	25.1	31.11	16.71	635.	2.7	1.7	92.99	10	812	0	81.5
N379	009	1977	26.4	32.87	18.90	635.	3.0	21.8	92.99	10	812	0	81.5
N379	009	1978	27.1	34.08	20.73	635.	3.2	51.9	92.99	10	812	0	81.5
N379	009	1979	28.0	35.69	24.17	635.	3.5	72.0	92.99	10	812	0	81.5
N379	010	1974	21.9	26.99	9.73	631.	1.8	1.5	92.94	4	55	0	61.5
N379	010	1975	23.0	28.11	10.10	631.	1.9	51.6	92.94	4	55	0	61.5
N379	010	1976	24.8	30.47	10.35	631.	2.2	81.7	92.94	4	55	0	61.5
N379	010	1977	25.9	32.11	11.71	631.	2.5	41.8	92.94	4	55	0	61.5
N379	010	1978	26.7	33.44	12.81	631.	2.7	51.9	92.94	4	55	0	61.5
N379	010	1979	27.9	35.17	13.98	631.	3.0	52.0	92.94	4	55	0	61.5
N379	011	1974	25.3	30.71	19.21	619.	1.4	31.5	92.87	4	55	0	21.5
N379	011	1975	26.3	31.91	19.63	619.	1.5	51.6	92.87	4	55	0	21.5
N379	011	1976	28.5	34.44	22.54	619.	1.8	1.7	92.87	4	55	0	21.5
N379	011	1977	30.1	36.56	25.07	619.	2.0	31.8	92.87	4	55	0	21.5
N379	011	1978	31.0	37.96	27.18	619.	2.1	91.9	92.87	4	55	0	21.5
N379	011	1979	32.2	39.99	29.51	619.	2.4	32.0	92.87	4	55	0	21.5
N379	012	1974	20.4	26.67	8.70	632.	1.8	11.5	92.73	0	0	0	21.5
N379	012	1975	22.0	27.54	8.63	632.	1.9	31.6	92.73	0	0	0	21.5
N379	012	1976	23.2	29.71	9.50	632.	2.2	41.7	92.73	0	0	0	21.5
N379	012	1977	25.6	31.61	9.87	632.	2.5	41.8	92.73	0	0	0	21.5
N379	012	1978	26.8	32.99	10.66	632.	2.7	61.9	92.73	0	0	0	21.5
N379	012	1979	28.4	35.10	12.16	632.	3.1	32.0	92.73	0	0	0	21.5

Appendix 11. Stand growth data for Pigeon Valley.

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N238	001	1969	358	28.5	23.0	29.2	358	35.6	26.0	32.4	25.56	23.0	269	112	9
N238	001	1972	358	28.5	23.0	29.2	358	37.7	27.1	33.1	25.56	23.0	269	112	9
N238	002	1969	507	35.7	23.0	27.3	507	42.8	26.0	31.8	24.42	0.0	0	0	0
N238	002	1972	507	35.7	23.0	27.3	507	45.1	27.1	33.5	24.42	0.0	0	0	0
N238	003	1969	408	31.3	23.0	28.5	383	37.7	26.0	33.1	24.89	23.0	269	112	9
N238	003	1972	408	31.3	23.0	28.5	383	40.1	27.1	33.6	24.89	23.0	269	112	9
N238	004	1969	532	41.0	23.0	29.0	519	49.5	26.0	32.5	25.37	23.0	269	112	9
N238	004	1972	532	41.0	23.0	29.0	519	52.5	27.1	33.4	25.37	23.0	269	112	9
N238	005	1969	470	26.6	23.0	23.9	457	29.1	25.2	26.8	20.08	0.0	0	0	0
N238	005	1971	470	26.6	23.0	23.9	457	30.6	26.0	28.2	20.08	0.0	0	0	0
N238	006	1969	655	42.8	23.0	30.2	643	49.7	26.0	32.2	25.59	0.0	0	0	0
N238	006	1972	655	42.8	23.0	30.2	643	52.0	27.1	33.0	25.59	0.0	0	0	0
N239	001	1969	1481	7.3	8.0	8.6	1481	17.0	10.1	12.4	25.57	8.0	269	112	9
N239	001	1971	1481	7.3	8.0	8.6	1481	19.9	11.0	13.5	25.57	8.0	269	112	9
N239	001	1972	1481	7.3	8.0	8.6	1481	23.3	12.1	16.1	25.57	8.0	269	112	9
N239	001	1978	247	15.6	17.0	18.5	247	21.2	19.0	23.2	25.57	17.0	269	0	0
N239	001	1980	247	15.6	17.0	18.5	247	25.5	21.0	24.2	25.57	17.0	269	0	0
N239	002	1969	1481	5.3	8.0	7.4	1481	12.8	10.1	10.9	23.24	8.0	269	112	9
N239	002	1971	1481	5.3	8.0	7.4	1481	15.0	11.0	11.8	23.24	8.0	269	112	9
N239	002	1972	1481	5.3	8.0	7.4	1481	18.1	12.1	14.2	23.24	8.0	269	112	9
N239	002	1978	272	12.8	17.0	19.0	272	18.8	19.0	19.5	23.24	17.0	269	0	0
N239	002	1980	272	12.8	17.0	19.0	272	24.1	21.0	21.4	23.24	17.0	269	0	0
N239	003	1969	1432	6.4	8.0	7.2	1432	13.0	10.1	11.4	24.07	0.0	0	0	0
N239	003	1971	1432	6.4	8.0	7.2	1432	15.2	11.0	12.8	24.07	0.0	0	0	0
N239	003	1972	1432	6.4	8.0	7.2	1432	19.3	12.1	14.6	24.07	0.0	0	0	0
N239	003	1978	247	8.7	17.0	18.4	247	11.2	19.0	19.6	24.07	0.0	0	0	0
N239	003	1980	247	8.7	17.0	18.4	247	14.0	21.0	24.0	24.07	0.0	0	0	0
N239	004	1969	1481	4.3	8.0	7.7	1481	11.6	10.1	11.8	24.54	8.0	269	112	9
N239	004	1971	1481	4.3	8.0	7.7	1481	13.8	11.0	12.7	24.54	8.0	269	112	9
N239	004	1972	1481	4.3	8.0	7.7	1481	17.2	12.1	15.0	24.54	8.0	269	112	9
N239	004	1978	247	12.6	17.0	21.3	247	17.6	19.0	22.1	24.54	17.0	269	0	0
N239	004	1980	247	12.6	17.0	21.3	247	21.8	21.0	24.3	24.54	17.0	269	0	0
N239	005	1969	1481	6.1	8.0	7.4	1481	12.5	10.1	11.1	24.22	0.0	0	0	0
N239	005	1971	1481	6.1	8.0	7.4	1481	14.4	11.0	12.1	24.22	0.0	0	0	0
N239	005	1972	1481	6.1	8.0	7.4	1481	17.5	12.1	14.5	24.22	0.0	0	0	0
N239	005	1978	247	8.4	17.0	19.6	247	11.2	19.0	21.7	24.22	0.0	0	0	0
N239	005	1980	247	8.4	17.0	19.6	247	14.4	21.0	24.5	24.22	0.0	0	0	0
N239	006	1969	1481	4.9	8.0	7.6	1481	10.2	10.1	11.2	24.76	0.0	0	0	0
N239	006	1971	1481	4.9	8.0	7.6	1481	12.0	11.0	12.0	24.76	0.0	0	0	0
N239	006	1972	1481	4.9	8.0	7.6	1481	14.3	12.1	15.0	24.76	0.0	0	0	0
N239	006	1978	247	7.4	17.0	17.7	247	9.3	19.0	17.3	24.76	0.0	0	0	0
N239	006	1980	247	7.4	17.0	17.7	247	11.6	21.0	22.2	24.76	0.0	0	0	0
N392	001	1974	667	3.5	6.0	7.2	622	12.2	10.0	13.4	28.76	6.0	0	75	0
N392	002	1974	667	3.0	6.0	6.4	556	13.6	10.0	13.0	27.04	6.0	300	75	0
N392	003	1974	667	3.5	6.0	6.6	578	12.7	10.0	14.6	27.55	6.0	100	75	0
N392	004	1974	667	3.6	6.0	6.9	522	13.3	10.0	14.5	28.11	6.0	200	75	0
N392	005	1974	667	4.7	6.0	7.1	644	19.9	10.0	13.8	28.57	6.0	300	75	0
N392	006	1974	667	6.7	6.0	8.4	656	19.2	10.0	16.5	31.45	6.0	100	75	0
N392	007	1974	656	6.8	6.0	8.4	644	22.8	10.0	16.1	31.43	6.0	200	75	0
N392	008	1974	667	5.0	6.0	8.5	667	16.3	10.0	14.6	31.59	6.0	0	75	0
N392	009	1974	667	4.3	6.0	6.9	667	17.6	10.0	14.6	28.03	6.0	100	75	0
N392	010	1974	667	3.6	6.0	6.5	667	17.8	10.0	13.6	27.23	6.0	200	75	0
N392	011	1974	667	3.0	6.0	7.0	667	11.9	10.0	14.0	28.34	6.0	0	75	0

Appendix 11. Stand growth data for Pigeon Valley.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N392	012	1974	656	4.6	6.0	6.5	622	20.7	10.0	15.0	27.09	6.0	300	75	0
N392	011	1982	267	5.8	10.0	13.3	267	14.7	14.0	19.5	28.76	0.0	0	0	0
N392	012	1982	267	6.8	10.0	13.4	256	17.4	14.0	18.4	27.04	10.0	300	0	0
N392	013	1982	267	5.8	10.0	14.1	267	14.9	14.0	19.7	27.55	10.0	100	0	0
N392	014	1982	267	7.4	10.0	14.4	267	17.4	14.0	22.1	28.11	10.0	200	0	0
N392	021	1982	267	9.5	10.0	13.7	256	21.5	14.0	21.4	28.57	10.0	300	0	0
N392	022	1982	267	9.1	10.0	16.3	267	20.5	14.0	23.2	31.45	10.0	100	0	0
N392	023	1982	267	10.5	10.0	15.8	267	21.8	14.0	22.1	31.43	10.0	200	0	0
N392	024	1982	267	6.7	10.0	14.4	267	15.9	14.0	20.8	31.58	0.0	0	0	0
N392	031	1982	256	7.7	10.0	14.5	244	17.7	14.0	21.5	28.03	10.0	100	0	0
N392	032	1982	279	7.9	10.0	13.6	278	17.9	14.0	21.1	27.23	10.0	200	0	0
N392	033	1982	267	5.7	10.0	14.0	267	13.2	14.0	20.3	28.34	0.0	0	0	0
N392	034	1982	267	9.3	10.0	14.8	267	21.1	14.0	21.0	27.09	10.0	300	0	0
N496	808	1980	1067	39.1	12.0	17.1	1067	43.3	13.0	18.3	28.48	0.0	0	0	0
N496	808	1981	1067	43.3	13.0	18.3	1033	51.4	15.0	20.7	28.48	0.0	0	0	0
N496	809	1980	1733	51.5	12.0	20.0	1717	55.5	13.0	21.1	31.48	0.0	0	0	0
N496	809	1981	1717	55.5	13.0	21.1	1650	63.5	15.0	23.0	31.48	0.0	0	0	0
N496	800	1980	933	43.0	13.0	23.5	933	46.6	14.0	24.2	33.02	0.0	0	0	0
N496	800	1981	933	46.6	14.0	24.2	917	53.6	16.0	25.9	33.02	0.0	0	0	0

Appendix 12. Sectional measurement data for Pigeon Valley.
(80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	001	004	1973	26.3	32.0	0.00	28.4	23.95
N238	001	004	1973	24.8	30.2	0.70	28.4	23.95
N238	001	004	1973	21.7	25.9	2.56	28.4	23.95
N238	001	004	1973	20.7	23.4	5.33	28.4	23.95
N238	001	004	1973	18.8	20.8	8.35	28.4	23.95
N238	001	004	1973	17.0	18.3	11.70	28.4	23.95
N238	001	004	1973	16.2	17.5	12.19	28.4	23.95
N238	001	004	1973	14.7	15.7	14.02	28.4	23.95
N238	001	004	1973	9.9	10.7	17.95	28.4	23.95
N238	001	004	1973	7.3	8.1	20.12	28.4	23.95
N238	001	004	1973	5.1	5.6	21.73	28.4	23.95
N238	001	020	1973	46.1	54.2	0.00	48.0	35.75
N238	001	020	1973	44.3	51.1	0.70	48.0	35.75
N238	001	020	1973	42.5	48.0	1.40	48.0	35.75
N238	001	020	1973	40.4	45.5	2.01	48.0	35.75
N238	001	020	1973	38.3	42.9	2.80	48.0	35.75
N238	001	020	1973	37.2	40.4	4.72	48.0	35.75
N238	001	020	1973	36.4	38.9	6.10	48.0	35.75
N238	001	020	1973	35.1	37.8	7.89	48.0	35.75
N238	001	020	1973	33.1	35.3	10.09	48.0	35.75
N238	001	020	1973	23.8	25.1	21.03	48.0	35.75
N238	001	020	1973	21.6	22.6	22.92	48.0	35.75
N238	001	020	1973	19.1	20.1	25.09	48.0	35.75
N238	001	020	1973	16.5	17.5	27.71	48.0	35.75
N238	001	020	1973	14.2	15.0	28.65	48.0	35.75
N238	001	020	1973	11.6	12.4	29.87	48.0	35.75
N238	001	020	1973	9.4	9.9	31.76	48.0	35.75
N238	001	020	1973	6.9	7.4	32.74	48.0	35.75
N238	001	020	1973	4.3	4.8	34.08	48.0	35.75
N238	001	024	1973	39.2	45.2	0.70	43.7	31.66
N238	001	024	1973	36.0	41.1	2.19	43.7	31.66
N238	001	024	1973	34.3	38.6	3.23	43.7	31.66
N238	001	024	1973	33.2	36.1	4.97	43.7	31.66
N238	001	024	1973	32.9	35.6	6.10	43.7	31.66
N238	001	024	1973	29.1	31.0	11.92	43.7	31.66
N238	001	024	1973	27.0	28.4	15.24	43.7	31.66
N238	001	024	1973	24.6	25.9	17.77	43.7	31.66
N238	001	024	1973	22.1	23.4	19.99	43.7	31.66
N238	001	024	1973	19.7	20.8	21.67	43.7	31.66
N238	001	024	1973	17.3	18.3	22.95	43.7	31.66
N238	001	024	1973	14.7	15.7	24.38	43.7	31.66
N238	001	024	1973	11.4	12.4	25.60	43.7	31.66
N238	001	024	1973	9.9	10.7	26.64	43.7	31.66
N238	001	024	1973	7.3	8.1	27.83	43.7	31.66
N238	001	024	1973	5.1	5.6	28.86	43.7	31.66
N238	001	025	1973	22.6	28.4	0.70	26.7	28.64
N238	001	025	1973	22.0	26.7	1.40	26.7	28.64
N238	001	025	1973	19.9	21.6	5.33	26.7	28.64
N238	001	025	1973	17.7	19.0	9.94	26.7	28.64
N238	001	025	1973	16.8	17.8	12.19	26.7	28.64

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	001	025	1973	15.5	16.5	14.45	26.7	28.64
N238	001	025	1973	13.0	14.0	18.14	26.7	28.64
N238	001	025	1973	10.6	11.4	21.00	26.7	28.64
N238	001	025	1973	8.1	8.9	23.77	26.7	28.64
N238	001	025	1973	5.8	6.3	25.85	26.7	28.64
N238	001	025	1973	3.3	3.8	26.82	26.7	28.64
N238	001	027	1973	43.2	51.8	0.00	44.2	34.22
N238	001	027	1973	40.3	48.0	0.70	44.2	34.22
N238	001	027	1973	36.0	41.7	2.10	44.2	34.22
N238	001	027	1973	33.7	36.6	5.24	44.2	34.22
N238	001	027	1973	31.8	3[illegible].0	8.17	44.2	34.22
N238	001	027	1973	29.7	31.5	10.45	44.2	34.22
N238	001	027	1973	28.4	30.0	12.19	44.2	34.22
N238	001	027	1973	27.5	29.0	13.32	44.2	34.22
N238	001	027	1973	24.6	25.9	16.76	44.2	34.22
N238	001	027	1973	22.6	23.9	19.05	44.2	34.22
N238	001	027	1973	20.0	21.3	21.03	44.2	34.22
N238	001	027	1973	17.8	18.8	22.68	44.2	34.22
N238	001	027	1973	15.3	16.3	25.27	44.2	34.22
N238	001	027	1973	12.7	13.7	26.79	44.2	34.22
N238	001	027	1973	8.0	8.6	31.00	44.2	34.22
N238	001	027	1973	5.6	6.1	33.50	44.2	34.22
N238	002	002	1973	38.5	45.3	0.00	39.1	33.18
N238	002	002	1973	35.7	42.2	0.70	39.1	33.18
N238	002	002	1973	32.9	39.1	1.40	39.1	33.18
N238	002	002	1973	31.7	36.6	2.35	39.1	33.18
N238	002	002	1973	29.1	31.5	5.27	39.1	33.18
N238	002	002	1973	28.8	31.2	6.10	39.1	33.18
N238	002	002	1973	24.6	26.4	12.19	39.1	33.18
N238	002	002	1973	22.3	23.9	15.24	39.1	33.18
N238	002	002	1973	19.8	21.3	18.53	39.1	33.18
N238	002	002	1973	17.5	18.8	20.73	39.1	33.18
N238	002	002	1973	12.6	13.7	25.05	39.1	33.18
N238	002	002	1973	7.7	8.6	28.65	39.1	33.18
N238	002	002	1973	5.5	6.1	29.32	39.1	33.18
N238	002	002	1973	3.1	3.6	31.18	39.1	33.18
N238	002	004	1973	22.7	29.2	0.00	24.6	25.32
N238	002	004	1973	19.8	24.6	1.40	24.6	25.32
N238	002	004	1973	18.2	22.1	2.50	24.6	25.32
N238	002	004	1973	16.0	17.8	6.10	24.6	25.32
N238	002	004	1973	13.5	14.5	11.86	24.6	25.32
N238	002	004	1973	13.5	14.5	12.19	24.6	25.32
N238	002	004	1973	11.1	11.9	15.79	24.6	25.32
N238	002	004	1973	8.6	9.4	19.02	24.6	25.32
N238	002	004	1973	6.3	6.9	21.18	24.6	25.32
N238	002	004	1973	3.8	4.3	23.53	24.6	25.32
N238	002	032	1973	40.3	47.8	1.40	47.8	32.42
N238	002	032	1973	38.0	45.2	1.80	47.8	32.42
N238	002	032	1973	36.4	42.7	3.11	47.8	32.42
N238	002	032	1973	35.3	40.1	4.54	47.8	32.42

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	002	032	1973	33.9	37.6	6.10	47.8	32.42
N238	002	032	1973	32.4	35.1	8.90	47.8	32.42
N238	002	032	1973	30.3	32.5	10.61	47.8	32.42
N238	002	032	1973	28.6	30.5	12.19	47.8	32.42
N238	002	032	1973	28.2	30.0	12.83	47.8	32.42
N238	002	032	1973	25.6	27.4	15.12	47.8	32.42
N238	002	032	1973	23.4	24.9	17.16	47.8	32.42
N238	002	032	1973	16.3	17.3	22.86	47.8	32.42
N238	002	032	1973	13.7	14.7	24.54	47.8	32.42
N238	002	032	1973	11.7	12.7	26.18	47.8	32.42
N238	002	032	1973	8.9	9.7	26.52	47.8	32.42
N238	002	032	1973	6.3	7.1	28.71	47.8	32.42
N238	002	032	1973	4.1	4.6	30.30	47.8	32.42
N238	002	033	1973	51.7	59.0	0.00	50.8	34.80
N238	002	033	1973	43.6	50.8	1.40	50.8	34.80
N238	002	033	1973	42.0	48.3	2.74	50.8	34.80
N238	002	033	1973	38.6	43.2	5.55	50.8	34.80
N238	002	033	1973	37.1	41.4	6.10	50.8	34.80
N238	002	033	1973	36.5	40.6	7.38	50.8	34.80
N238	002	033	1973	34.6	38.1	9.66	50.8	34.80
N238	002	033	1973	32.5	35.6	11.61	50.8	34.80
N238	002	033	1973	32.1	34.8	12.19	50.8	34.80
N238	002	033	1973	30.7	33.0	13.75	50.8	34.80
N238	002	033	1973	28.7	30.5	15.61	50.8	34.80
N238	002	033	1973	24.1	25.4	20.09	50.8	34.80
N238	002	033	1973	21.9	22.9	22.22	50.8	34.80
N238	002	033	1973	16.8	17.8	25.36	50.8	34.80
N238	002	033	1973	13.7	14.5	27.19	50.8	34.80
N238	002	033	1973	11.9	12.7	28.38	50.8	34.80
N238	002	033	1973	9.4	10.2	29.69	50.8	34.80
N238	002	033	1973	6.8	7.6	30.91	50.8	34.80
N238	002	033	1973	2.0	2.5	33.25	50.8	34.80
N238	002	034	1973	27.5	33.3	0.70	31.7	31.51
N238	002	034	1973	26.2	31.7	1.40	31.7	31.51
N238	002	034	1973	25.3	29.2	2.38	31.7	31.51
N238	002	034	1973	22.8	24.1	6.10	31.7	31.51
N238	002	034	1973	20.3	21.6	10.88	31.7	31.51
N238	002	034	1973	19.5	20.8	12.19	31.7	31.51
N238	002	034	1973	17.7	19.0	15.30	31.7	31.51
N238	002	034	1973	15.5	16.5	19.17	31.7	31.51
N238	002	034	1973	13.2	14.0	21.92	31.7	31.51
N238	002	034	1973	10.6	11.4	24.87	31.7	31.51
N238	002	034	1973	5.5	6.3	29.11	31.7	31.51
N238	002	034	1973	3.3	3.8	30.57	31.7	31.51
N238	003	002	1973	27.9	35.6	0.00	28.4	28.40
N238	003	002	1973	25.7	32.0	0.70	28.4	28.40
N238	003	002	1973	22.6	25.9	2.65	28.4	28.40
N238	003	002	1973	21.5	23.4	4.42	28.4	28.40
N238	003	002	1973	21.0	22.4	6.10	28.4	28.40
N238	003	002	1973	19.5	20.8	9.11	28.4	28.40

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	003	002	1973	17.8	18.8	12.19	28.4	28.40
N238	003	002	1973	14.7	15.7	16.25	28.4	28.40
N238	003	002	1973	12.3	13.2	19.11	28.4	28.40
N238	003	002	1973	9.8	10.7	21.40	28.4	28.40
N238	003	002	1973	7.3	8.1	23.99	28.4	28.40
N238	003	002	1973	2.5	3.0	27.31	28.4	28.40
N238	003	014	1973	41.2	49.3	0.70	47.5	34.58
N238	003	014	1973	41.3	47.5	1.40	47.5	34.58
N238	003	014	1973	36.6	42.4	2.99	47.5	34.58
N238	003	014	1973	35.4	39.9	5.06	47.5	34.58
N238	003	014	1973	33.6	37.3	7.16	47.5	34.58
N238	003	014	1973	29.9	32.3	12.19	47.5	34.58
N238	003	014	1973	27.7	29.7	14.84	47.5	34.58
N238	003	014	1973	25.4	27.2	17.53	47.5	34.58
N238	003	014	1973	22.8	24.6	19.48	47.5	34.58
N238	003	014	1973	20.8	22.1	21.28	47.5	34.58
N238	003	014	1973	18.6	19.6	23.04	47.5	34.58
N238	003	014	1973	16.0	17.0	25.18	47.5	34.58
N238	003	014	1973	13.5	14.5	26.97	47.5	34.58
N238	003	014	1973	10.9	11.9	28.62	47.5	34.58
N238	003	014	1973	8.6	9.4	29.90	47.5	34.58
N238	003	014	1973	6.4	6.9	31.06	47.5	34.58
N238	003	014	1973	3.9	4.3	32.37	47.5	34.58
N238	003	022	1973	31.0	36.6	0.00	32.0	27.82
N238	003	022	1973	29.0	34.3	0.70	32.0	27.82
N238	003	022	1973	27.0	32.0	1.40	32.0	27.82
N238	003	022	1973	23.4	25.9	6.10	32.0	27.82
N238	003	022	1973	22.6	24.4	7.99	32.0	27.82
N238	003	022	1973	20.1	21.8	11.46	32.0	27.82
N238	003	022	1973	19.6	21.3	12.19	32.0	27.82
N238	003	022	1973	17.6	19.3	15.03	32.0	27.82
N238	003	022	1973	15.7	16.8	16.82	32.0	27.82
N238	003	022	1973	13.2	14.2	19.84	32.0	27.82
N238	003	022	1973	10.9	11.7	21.92	32.0	27.82
N238	003	022	1973	8.3	9.1	23.32	32.0	27.82
N238	003	022	1973	7.3	8.1	23.99	32.0	27.82
N238	003	024	1973	45.9	54.3	0.00	46.7	33.00
N238	003	024	1973	42.9	50.5	0.70	46.7	33.00
N238	003	024	1973	38.9	44.2	2.90	46.7	33.00
N238	003	024	1973	37.6	41.7	3.57	46.7	33.00
N238	003	024	1973	36.4	39.1	4.82	46.7	33.00
N238	003	024	1973	34.3	36.6	6.10	46.7	33.00
N238	003	024	1973	32.3	34.0	8.81	46.7	33.00
N238	003	024	1973	29.7	31.2	12.19	46.7	33.00
N238	003	024	1973	27.7	29.0	14.02	46.7	33.00
N238	003	024	1973	25.1	26.4	16.34	46.7	33.00
N238	003	024	1973	22.6	23.9	19.14	46.7	33.00
N238	003	024	1973	20.2	21.3	20.54	46.7	33.00
N238	003	024	1973	17.7	18.8	22.52	46.7	33.00
N238	003	024	1973	10.2	11.2	26.91	46.7	33.00

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	003	024	1973	7.8	8.6	28.65	46.7	33.00
N238	003	024	1973	5.3	6.1	30.02	46.7	33.00
N238	003	024	1973	3.1	3.6	31.58	46.7	33.00
N238	003	032	1973	51.8	59.7	0.00	49.5	35.13
N238	003	032	1973	43.7	49.5	1.40	49.5	35.13
N238	003	032	1973	41.5	47.0	2.59	49.5	35.13
N238	003	032	1973	39.7	44.4	3.81	49.5	35.13
N238	003	032	1973	38.7	41.9	5.67	49.5	35.13
N238	003	032	1973	38.2	41.1	6.10	49.5	35.13
N238	003	032	1973	36.8	39.4	8.32	49.5	35.13
N238	003	032	1973	33.2	35.3	12.19	49.5	35.13
N238	003	032	1973	32.4	34.3	13.69	49.5	35.13
N238	003	032	1973	29.9	31.7	15.67	49.5	35.13
N238	003	032	1973	27.5	29.2	17.74	49.5	35.13
N238	003	032	1973	20.4	21.6	23.26	49.5	35.13
N238	003	032	1973	18.0	19.0	24.99	49.5	35.13
N238	003	032	1973	15.5	16.5	26.76	49.5	35.13
N238	003	032	1973	13.0	14.0	28.22	49.5	35.13
N238	003	032	1973	8.1	8.9	31.03	49.5	35.13
N238	003	032	1973	5.5	6.3	32.80	49.5	35.13
N238	003	032	1973	3.3	3.8	34.05	49.5	35.13
N238	004	005	1973	24.9	31.8	0.00	28.2	28.82
N238	004	005	1973	23.9	30.0	0.70	28.2	28.82
N238	004	005	1973	22.9	28.2	1.40	28.2	28.82
N238	004	005	1973	21.9	25.7	2.59	28.2	28.82
N238	004	005	1973	19.1	20.6	7.22	28.2	28.82
N238	004	005	1973	17.0	18.0	11.70	28.2	28.82
N238	004	005	1973	14.7	15.5	15.39	28.2	28.82
N238	004	005	1973	12.2	13.0	18.71	28.2	28.82
N238	004	005	1973	9.8	10.4	21.43	28.2	28.82
N238	004	005	1973	7.4	7.9	23.10	28.2	28.82
N238	004	005	1973	4.8	5.3	24.78	28.2	28.82
N238	004	005	1973	2.4	2.8	26.64	28.2	28.82
N238	004	013	1973	25.1	32.3	0.00	26.7	28.34
N238	004	013	1973	23.7	29.5	0.70	26.7	28.34
N238	004	013	1973	22.3	26.7	1.40	26.7	28.34
N238	004	013	1973	18.3	20.3	6.10	26.7	28.34
N238	004	013	1973	17.2	19.0	7.22	26.7	28.34
N238	004	013	1973	15.2	16.5	11.09	26.7	28.34
N238	004	013	1973	13.0	14.0	15.61	26.7	28.34
N238	004	013	1973	10.6	11.4	19.26	26.7	28.34
N238	004	013	1973	8.1	8.9	21.70	26.7	28.34
N238	004	013	1973	5.8	6.3	23.99	26.7	28.34
N238	004	013	1973	3.3	3.8	26.21	26.7	28.34
N238	004	019	1973	35.7	46.2	0.00	42.2	32.30
N238	004	019	1973	34.8	44.2	0.70	42.2	32.30
N238	004	019	1973	33.9	42.2	1.40	42.2	32.30
N238	004	019	1973	30.9	37.1	3.11	42.2	32.30
N238	004	019	1973	30.6	34.5	4.63	42.2	32.30
N238	004	019	1973	29.7	32.5	6.10	42.2	32.30

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	004	019	1973	29.5	32.0	6.71	42.2	32.30
N238	004	019	1973	27.2	29.5	10.76	42.2	32.30
N238	004	019	1973	25.4	26.9	12.95	42.2	32.30
N238	004	019	1973	22.9	24.4	15.82	42.2	32.30
N238	004	019	1973	18.0	19.3	21.00	42.2	32.30
N238	004	019	1973	15.6	16.8	23.10	42.2	32.30
N238	004	019	1973	13.2	14.2	24.48	42.2	32.30
N238	004	019	1973	8.3	9.1	27.31	42.2	32.30
N238	004	019	1973	6.1	6.6	28.53	42.2	32.30
N238	004	019	1973	3.6	4.1	30.11	42.2	32.30
N238	004	027	1973	37.4	45.3	0.00	41.1	36.38
N238	004	027	1973	35.9	43.2	0.70	41.1	36.38
N238	004	027	1973	32.6	38.6	2.35	41.1	36.38
N238	004	027	1973	31.0	36.1	3.54	41.1	36.38
N238	004	027	1973	28.0	31.0	7.25	41.1	36.38
N238	004	027	1973	26.1	28.4	10.12	41.1	36.38
N238	004	027	1973	24.9	26.9	12.19	41.1	36.38
N238	004	027	1973	24.0	25.9	13.50	41.1	36.38
N238	004	027	1973	21.9	23.4	16.58	41.1	36.38
N238	004	027	1973	19.4	20.8	19.23	41.1	36.38
N238	004	027	1973	17.2	18.3	22.25	41.1	36.38
N238	004	027	1973	14.7	15.7	24.81	41.1	36.38
N238	004	027	1973	12.2	13.2	27.01	41.1	36.38
N238	004	027	1973	7.3	8.1	30.82	41.1	36.38
N238	004	027	1973	5.1	5.6	32.89	41.1	36.38
N238	004	027	1973	2.6	3.0	34.50	41.1	36.38
N238	004	030	1973	34.9	41.9	0.70	39.1	33.58
N238	004	030	1973	33.4	39.1	1.40	39.1	33.58
N238	004	030	1973	31.6	36.6	2.47	39.1	33.58
N238	004	030	1973	30.4	34.0	3.38	39.1	33.58
N238	004	030	1973	29.1	31.5	5.27	39.1	33.58
N238	004	030	1973	29.1	31.5	6.10	39.1	33.58
N238	004	030	1973	27.2	29.0	8.53	39.1	33.58
N238	004	030	1973	20.0	21.3	17.34	39.1	33.58
N238	004	030	1973	17.8	18.8	20.54	39.1	33.58
N238	004	030	1973	15.3	16.3	22.80	39.1	33.58
N238	004	030	1973	10.4	11.2	27.22	39.1	33.58
N238	004	030	1973	7.8	8.6	29.14	39.1	33.58
N238	004	030	1973	5.6	6.1	30.57	39.1	33.58
N238	004	030	1973	3.1	3.6	31.73	39.1	33.58
N238	005	004	1973	22.1	26.9	0.70	24.4	23.73
N238	005	004	1973	20.3	24.4	1.40	24.4	23.73
N238	005	004	1973	18.6	21.8	2.80	24.4	23.73
N238	005	004	1973	17.6	19.3	4.57	24.4	23.73
N238	005	004	1973	17.0	18.3	6.10	24.4	23.73
N238	005	004	1973	13.2	14.2	11.86	24.4	23.73
N238	005	004	1973	12.7	13.7	12.19	24.4	23.73
N238	005	004	1973	10.9	11.7	14.78	24.4	23.73
N238	005	004	1973	8.3	9.1	17.83	24.4	23.73
N238	005	004	1973	6.0	6.6	19.81	24.4	23.73

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	005	013	1973	33.6	41.4	0.00	36.8	28.73
N238	005	013	1973	32.0	39.1	0.70	36.8	28.73
N238	005	013	1973	30.3	36.8	1.40	36.8	28.73
N238	005	013	1973	28.4	34.3	2.74	36.8	28.73
N238	005	013	1973	26.5	29.2	5.70	36.8	28.73
N238	005	013	1973	26.0	28.7	6.10	36.8	28.73
N238	005	013	1973	24.6	26.7	8.50	36.8	28.73
N238	005	013	1973	21.6	23.1	12.19	36.8	28.73
N238	005	013	1973	17.8	19.0	16.86	36.8	28.73
N238	005	013	1973	15.5	16.5	19.48	36.8	28.73
N238	005	013	1973	13.0	14.0	21.21	36.8	28.73
N238	005	013	1973	8.1	8.9	24.75	36.8	28.73
N238	005	013	1973	5.5	6.3	26.21	36.8	28.73
N238	005	013	1973	3.3	3.8	27.40	36.8	28.73
N238	005	015	1973	21.4	26.4	0.00	23.4	22.64
N238	005	015	1973	18.0	20.8	3.11	23.4	22.64
N238	005	015	1973	16.5	18.3	5.49	23.4	22.64
N238	005	015	1973	16.2	17.8	6.10	23.4	22.64
N238	005	015	1973	14.6	15.7	8.56	23.4	22.64
N238	005	015	1973	12.2	13.2	12.19	23.4	22.64
N238	005	015	1973	9.9	10.7	15.61	23.4	22.64
N238	005	015	1973	7.3	8.1	17.74	23.4	22.64
N238	005	015	1973	5.1	5.6	19.48	23.4	22.64
N238	005	015	1973	2.5	3.0	21.34	23.4	22.64
N238	005	021	1973	29.1	35.8	1.40	35.8	26.66
N238	005	021	1973	28.0	33.3	2.93	35.8	26.66
N238	005	021	1973	27.3	30.7	4.18	35.8	26.66
N238	005	021	1973	25.1	28.4	6.10	35.8	26.66
N238	005	021	1973	25.3	28.2	6.61	35.8	26.66
N238	005	021	1973	21.3	23.1	11.06	35.8	26.66
N238	005	021	1973	19.1	20.6	13.90	35.8	26.66
N238	005	021	1973	16.7	18.0	16.43	35.8	26.66
N238	005	021	1973	14.2	15.5	18.29	35.8	26.66
N238	005	021	1973	12.0	13.0	19.84	35.8	26.66
N238	005	021	1973	9.4	10.4	21.79	35.8	26.66
N238	005	021	1973	7.1	7.9	23.38	35.8	26.66
N238	005	021	1973	4.7	5.3	24.57	35.8	26.66
N238	005	021	1973	2.3	2.8	25.85	35.8	26.66
N238	006	020	1973	20.5	27.7	0.00	22.1	26.14
N238	006	020	1973	19.1	24.9	0.70	22.1	26.14
N238	006	020	1973	17.7	22.1	1.40	22.1	26.14
N238	006	020	1973	16.8	19.6	3.47	22.1	26.14
N238	006	020	1973	15.9	17.5	6.10	22.1	26.14
N238	006	020	1973	13.5	14.5	10.82	22.1	26.14
N238	006	020	1973	12.9	13.7	12.19	22.1	26.14
N238	006	020	1973	11.1	11.9	15.33	22.1	26.14
N238	006	020	1973	6.2	6.9	20.42	22.1	26.14
N238	006	020	1973	3.8	4.3	23.16	22.1	26.14
N238	006	024	1973	35.3	41.1	0.70	38.6	30.32
N238	006	024	1973	32.1	36.1	2.74	38.6	30.32

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	006	024	1973	30.5	33.5	3.87	38.6	30.32
N238	006	024	1973	28.9	31.0	5.58	38.6	30.32
N238	006	024	1973	28.8	30.7	6.10	38.6	30.32
N238	006	024	1973	26.8	28.4	8.35	38.6	30.32
N238	006	024	1973	24.6	25.9	12.19	38.6	30.32
N238	006	024	1973	22.1	23.4	14.94	38.6	30.32
N238	006	024	1973	19.7	20.8	17.25	38.6	30.32
N238	006	024	1973	14.7	15.7	21.82	38.6	30.32
N238	006	024	1973	12.2	13.2	23.84	38.6	30.32
N238	006	024	1973	10.8	11.7	24.90	38.6	30.32
N238	006	024	1973	7.6	8.1	26.70	38.6	30.32
N238	006	024	1973	5.1	5.6	28.04	38.6	30.32
N238	006	033	1973	42.9	49.6	0.00	43.4	34.43
N238	006	033	1973	39.6	46.5	0.70	43.4	34.43
N238	006	033	1973	34.5	40.9	2.62	43.4	34.43
N238	006	033	1973	33.4	38.4	4.27	43.4	34.43
N238	006	033	1973	31.2	35.8	4.75	43.4	34.43
N238	006	033	1973	30.3	34.0	6.10	43.4	34.43
N238	006	033	1973	30.0	33.3	6.77	43.4	34.43
N238	006	033	1973	27.8	30.7	9.24	43.4	34.43
N238	006	033	1973	26.5	28.4	11.58	43.4	34.43
N238	006	033	1973	26.3	27.9	12.19	43.4	34.43
N238	006	033	1973	19.6	20.6	19.81	43.4	34.43
N238	006	033	1973	17.0	18.0	22.16	43.4	34.43
N238	006	033	1973	14.7	15.5	24.38	43.4	34.43
N238	006	033	1973	12.2	13.0	26.27	43.4	34.43
N238	006	033	1973	9.6	10.4	28.47	43.4	34.43
N238	006	033	1973	7.1	7.9	29.87	43.4	34.43
N238	006	039	1973	37.6	46.3	0.00	41.1	34.52
N238	006	039	1973	35.6	43.7	0.70	41.1	34.52
N238	006	039	1973	32.1	38.6	2.41	41.1	34.52
N238	006	039	1973	29.6	33.5	6.10	41.1	34.52
N238	006	039	1973	27.6	31.0	9.36	41.1	34.52
N238	006	039	1973	26.0	28.4	11.49	41.1	34.52
N238	006	039	1973	25.6	27.9	12.19	41.1	34.52
N238	006	039	1973	23.7	25.9	14.39	41.1	34.52
N238	006	039	1973	21.8	23.4	17.07	41.1	34.52
N238	006	039	1973	19.3	20.8	20.18	41.1	34.52
N238	006	039	1973	17.0	18.3	22.40	41.1	34.52
N238	006	039	1973	14.6	15.7	24.69	41.1	34.52
N238	006	039	1973	12.2	13.2	26.94	41.1	34.52
N238	006	039	1973	9.7	10.7	28.44	41.1	34.52
N238	006	050	1973	20.1	25.3	0.00	23.9	25.41
N238	006	050	1973	19.6	24.6	0.70	23.9	25.41
N238	006	050	1973	18.4	21.3	2.56	23.9	25.41
N238	006	050	1973	17.1	18.8	5.85	23.9	25.41
N238	006	050	1973	17.5	18.8	6.10	23.9	25.41
N238	006	050	1973	15.3	16.3	9.30	23.9	25.41
N238	006	050	1973	13.0	13.7	13.23	23.9	25.41
N238	006	050	1973	8.0	8.6	19.54	23.9	25.41

Appendix 12. Sectional measurement data for Pigeon Valley. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	006	050	1973	5.6	6.1	21.49	23.9	25.41
N238	006	050	1973	3.1	3.6	23.29	23.9	25.41
N239	001	006	1973	10.7	12.6	0.00	10.2	11.22
N239	001	006	1973	10.0	11.4	0.70	10.2	11.22
N239	001	006	1973	8.1	8.9	2.90	10.2	11.22
N239	001	006	1973	6.8	7.6	4.69	10.2	11.22
N239	001	006	1973	5.5	6.3	6.22	10.2	11.22
N239	001	006	1973	4.3	5.1	7.71	10.2	11.22
N239	001	006	1973	3.3	3.8	8.81	10.2	11.22
N239	001	013	1973	16.1	18.3	0.00	14.7	11.88
N239	001	013	1973	14.7	16.5	0.70	14.7	11.88
N239	001	013	1973	13.2	14.7	1.40	14.7	11.88
N239	001	013	1973	12.5	13.5	1.89	14.7	11.88
N239	001	013	1973	11.2	12.2	2.77	14.7	11.88
N239	001	013	1973	9.9	10.9	3.93	14.7	11.88
N239	001	013	1973	7.6	8.4	5.85	14.7	11.88
N239	001	013	1973	6.3	7.1	7.16	14.7	11.88
N239	001	013	1973	4.0	4.6	9.30	14.7	11.88
N239	001	013	1973	2.8	3.3	10.06	14.7	11.88
N239	001	019	1973	10.2	12.3	0.00	9.1	12.25
N239	001	019	1973	9.2	10.7	0.70	9.1	12.25
N239	001	019	1973	8.3	9.1	1.40	9.1	12.25
N239	001	019	1973	7.2	7.9	3.99	9.1	12.25
N239	001	019	1973	6.1	6.6	6.00	9.1	12.25
N239	001	019	1973	4.8	5.3	7.86	9.1	12.25
N239	001	021	1973	18.7	22.3	0.00	19.3	16.63
N239	001	021	1973	17.9	20.8	0.70	19.3	16.63
N239	001	021	1973	17.1	19.3	1.40	19.3	16.63
N239	001	021	1973	15.5	16.8	2.99	19.3	16.63
N239	001	021	1973	13.2	14.2	5.09	19.3	16.63
N239	001	021	1973	10.7	11.7	7.89	19.3	16.63
N239	001	021	1973	3.6	4.1	14.42	19.3	16.63
N239	001	025	1973	14.5	17.6	0.00	15.0	13.77
N239	001	025	1973	12.2	13.7	2.65	15.0	13.77
N239	001	025	1973	11.4	12.4	3.87	15.0	13.77
N239	001	025	1973	10.2	11.2	5.09	15.0	13.77
N239	001	025	1973	8.9	9.9	6.68	15.0	13.77
N239	001	025	1973	7.8	8.6	7.86	15.0	13.77
N239	001	025	1973	6.6	7.4	9.11	15.0	13.77
N239	001	025	1973	5.4	6.1	10.27	15.0	13.77
N239	001	025	1973	4.3	4.8	11.13	15.0	13.77
N239	001	025	1973	3.1	3.6	11.77	15.0	13.77
N239	001	041	1973	20.2	24.5	0.00	21.3	17.00
N239	001	041	1973	19.4	22.9	0.70	21.3	17.00
N239	001	041	1973	18.6	21.3	1.40	21.3	17.00
N239	001	041	1973	17.0	18.8	3.05	21.3	17.00
N239	001	041	1973	15.0	16.3	4.66	21.3	17.00
N239	001	041	1973	12.7	13.7	7.19	21.3	17.00
N239	001	041	1973	10.4	11.2	9.24	21.3	17.00
N239	001	041	1973	3.3	3.6	15.27	21.3	17.00

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	001	043	1973	10.4	12.4	0.00	11.4	12.61
N239	001	043	1973	10.3	11.4	1.40	11.4	12.61
N239	001	043	1973	9.4	10.2	2.65	11.4	12.61
N239	001	043	1973	8.4	8.9	4.02	11.4	12.61
N239	001	043	1973	7.1	7.6	5.88	11.4	12.61
N239	001	043	1973	5.8	6.3	7.56	11.4	12.61
N239	001	043	1973	4.6	5.1	8.78	11.4	12.61
N239	001	043	1973	2.2	2.5	11.09	11.4	12.61
N239	001	048	1973	18.1	21.1	0.00	18.5	14.80
N239	001	048	1973	17.2	19.8	0.70	18.5	14.80
N239	001	048	1973	16.3	13.5	1.40	18.5	14.80
N239	001	048	1973	14.4	16.0	3.41	18.5	14.80
N239	001	048	1973	12.4	13.5	5.58	18.5	14.80
N239	001	048	1973	9.9	10.9	7.83	18.5	14.80
N239	001	048	1973	7.4	8.4	9.81	18.5	14.80
N239	001	052	1973	22.9	28.0	0.00	20.8	15.84
N239	001	052	1973	20.6	24.4	0.70	20.8	15.84
N239	001	052	1973	18.3	20.8	1.40	20.8	15.84
N239	001	052	1973	17.1	18.3	2.83	20.8	15.84
N239	001	052	1973	14.7	15.7	4.66	20.8	15.84
N239	001	052	1973	12.2	13.2	7.22	20.8	15.84
N239	001	052	1973	9.7	10.7	9.33	20.8	15.84
N239	001	052	1973	2.5	3.0	14.54	20.8	15.84
N239	002	001	1973	18.7	22.7	0.00	18.5	13.55
N239	002	001	1973	17.3	20.6	0.70	18.5	13.55
N239	002	001	1973	15.9	18.5	1.40	18.5	13.55
N239	002	001	1973	14.9	16.0	2.80	18.5	13.55
N239	002	001	1973	13.7	14.7	3.78	18.5	13.55
N239	002	001	1973	10.1	10.9	6.68	18.5	13.55
N239	002	001	1973	8.9	9.7	8.29	18.5	13.55
N239	002	001	1973	7.6	8.4	9.51	18.5	13.55
N239	002	001	1973	6.3	7.1	10.73	18.5	13.55
N239	002	001	1973	5.3	5.8	11.37	18.5	13.55
N239	002	001	1973	4.1	4.6	12.16	18.5	13.55
N239	002	009	1973	11.1	13.9	0.00	9.9	13.07
N239	002	009	1973	10.1	11.9	0.70	9.9	13.07
N239	002	009	1973	9.1	9.9	1.40	9.9	13.07
N239	002	009	1973	8.6	9.1	2.77	9.9	13.07
N239	002	009	1973	7.9	8.4	4.11	9.9	13.07
N239	002	009	1973	7.1	7.6	5.24	9.9	13.07
N239	002	009	1973	5.6	6.1	8.56	9.9	13.07
N239	002	009	1973	4.8	5.3	9.36	9.9	13.07
N239	002	009	1973	3.5	3.8	11.25	9.9	13.07
N239	002	022	1973	9.2	10.7	0.70	9.4	10.93
N239	002	022	1973	8.4	9.4	1.40	9.4	10.93
N239	002	022	1973	7.8	8.6	2.80	9.4	10.93
N239	002	022	1973	7.4	7.9	3.87	9.4	10.93
N239	002	022	1973	5.8	6.3	6.46	9.4	10.93
N239	002	022	1973	5.1	5.6	7.04	9.4	10.93
N239	002	022	1973	4.3	4.8	7.59	9.4	10.93

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	002	022	1973	3.6	4.1	8.20	9.4	10.93
N239	002	024	1973	15.6	18.0	0.70	16.8	14.01
N239	002	024	1973	14.8	16.8	1.40	16.8	14.01
N239	002	024	1973	13.2	14.2	3.23	16.8	14.01
N239	002	024	1973	12.2	13.0	4.15	16.8	14.01
N239	002	024	1973	9.6	10.4	6.49	16.8	14.01
N239	002	024	1973	8.3	9.1	7.50	16.8	14.01
N239	002	024	1973	7.1	7.9	8.81	16.8	14.01
N239	002	024	1973	5.8	6.6	9.78	16.8	14.01
N239	002	024	1973	4.8	5.3	10.88	16.8	14.01
N239	002	024	1973	3.6	4.1	11.86	16.8	14.01
N239	002	025	1973	12.3	14.2	0.70	13.2	13.61
N239	002	025	1973	11.1	11.9	2.71	13.2	13.61
N239	002	025	1973	9.9	10.7	4.39	13.2	13.61
N239	002	025	1973	8.9	9.4	6.25	13.2	13.61
N239	002	025	1973	7.6	8.1	8.35	13.2	13.61
N239	002	025	1973	6.4	6.9	10.03	13.2	13.61
N239	002	025	1973	5.1	5.6	11.16	13.2	13.61
N239	002	025	1973	3.8	4.3	12.04	13.2	13.61
N239	002	033	1973	14.9	19.2	0.00	16.8	13.19
N239	002	033	1973	14.3	16.8	1.40	16.8	13.19
N239	002	033	1973	13.5	15.5	2.04	16.8	13.19
N239	002	033	1973	12.2	14.2	3.08	16.8	13.19
N239	002	033	1973	11.5	13.0	3.84	16.8	13.19
N239	002	033	1973	9.4	10.4	5.70	16.8	13.19
N239	002	033	1973	8.1	9.1	6.74	16.8	13.19
N239	002	033	1973	6.9	7.9	7.59	16.8	13.19
N239	002	033	1973	5.8	6.6	8.81	16.8	13.19
N239	002	033	1973	4.5	5.3	10.12	16.8	13.19
N239	002	046	1973	17.7	22.6	0.00	20.6	13.65
N239	002	046	1973	16.9	20.6	1.40	20.6	13.65
N239	002	046	1973	13.5	15.5	3.60	20.6	13.65
N239	002	046	1973	11.7	13.0	4.85	20.6	13.65
N239	002	046	1973	9.4	10.4	6.58	20.6	13.65
N239	002	046	1973	6.9	7.9	8.81	20.6	13.65
N239	002	046	1973	4.5	5.3	10.94	20.6	13.65
N239	002	046	1973	2.3	2.8	12.80	20.6	13.65
N239	002	049	1973	7.9	8.9	0.70	8.6	9.44
N239	002	049	1973	7.8	8.6	1.40	8.6	9.44
N239	002	049	1973	7.1	7.9	2.41	8.6	9.44
N239	002	049	1973	5.8	6.3	4.24	8.6	9.44
N239	002	049	1973	5.1	5.6	5.15	8.6	9.44
N239	002	049	1973	4.3	4.8	5.76	8.6	9.44
N239	002	049	1973	3.6	4.1	6.43	8.6	9.44
N239	002	049	1973	2.8	3.3	7.19	8.6	9.44
N239	002	058	1973	12.2	14.2	0.70	12.7	13.25
N239	002	058	1973	11.6	12.7	1.40	12.7	13.25
N239	002	058	1973	9.4	10.2	5.70	12.7	13.25
N239	002	058	1973	8.1	8.9	7.04	12.7	13.25
N239	002	058	1973	6.8	7.6	8.08	12.7	13.25

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	002	058	1973	5.8	6.3	9.36	12.7	13.25
N239	002	058	1973	4.6	5.1	10.33	12.7	13.25
N239	002	058	1973	3.3	3.8	11.43	12.7	13.25
N239	003	012	1973	9.3	11.2	0.00	8.6	10.35
N239	003	012	1973	8.3	9.9	0.70	8.6	10.35
N239	003	012	1973	7.3	8.6	1.40	8.6	10.35
N239	003	012	1973	7.3	8.1	2.44	8.6	10.35
N239	003	012	1973	6.1	6.6	5.09	8.6	10.35
N239	003	012	1973	5.3	5.8	6.22	8.6	10.35
N239	003	012	1973	4.6	5.1	6.95	8.6	10.35
N239	003	012	1973	3.8	4.3	7.71	8.6	10.35
N239	003	016	1973	16.4	18.8	0.70	18.0	12.40
N239	003	016	1973	15.8	18.0	1.40	18.0	12.40
N239	003	016	1973	14.5	15.5	2.59	18.0	12.40
N239	003	016	1973	12.2	13.0	4.45	18.0	12.40
N239	003	016	1973	9.6	10.4	6.28	18.0	12.40
N239	003	016	1973	7.1	7.9	7.89	18.0	12.40
N239	003	016	1973	2.3	2.8	11.06	18.0	12.40
N239	003	020	1973	18.2	21.6	0.70	19.8	14.89
N239	003	020	1973	17.0	19.8	1.40	19.8	14.89
N239	003	020	1973	15.5	17.3	2.74	19.8	14.89
N239	003	020	1973	13.4	14.7	4.18	19.8	14.89
N239	003	020	1973	11.2	12.2	5.97	19.8	14.89
N239	003	020	1973	8.7	9.7	8.41	19.8	14.89
N239	003	020	1973	4.1	4.6	12.10	19.8	14.89
N239	003	022	1973	14.2	17.5	0.00	14.5	12.64
N239	003	022	1973	13.2	16.0	0.70	14.5	12.64
N239	003	022	1973	12.2	14.5	1.40	14.5	12.64
N239	003	022	1973	11.4	13.2	2.41	14.5	12.64
N239	003	022	1973	8.4	9.4	6.10	14.5	12.64
N239	003	022	1973	7.3	8.1	7.25	14.5	12.64
N239	003	022	1973	6.1	6.9	8.32	14.5	12.64
N239	003	022	1973	5.1	5.6	9.63	14.5	12.64
N239	003	022	1973	3.8	4.3	10.64	14.5	12.64
N239	003	022	1973	2.5	3.0	11.40	14.5	12.64
N239	003	029	1973	11.7	14.5	0.00	11.9	12.58
N239	003	029	1973	9.9	10.7	3.26	11.9	12.58
N239	003	029	1973	8.6	9.4	5.03	11.9	12.58
N239	003	029	1973	7.3	8.1	6.77	11.9	12.58
N239	003	029	1973	6.4	6.9	8.23	11.9	12.58
N239	003	029	1973	5.1	5.6	9.42	11.9	12.58
N239	003	029	1973	3.8	4.3	10.52	11.9	12.58
N239	003	029	1973	2.5	3.0	11.28	11.9	12.58
N239	003	031	1973	7.7	10.3	0.00	7.9	10.35
N239	003	031	1973	7.4	9.1	0.70	7.9	10.35
N239	003	031	1973	7.2	7.9	1.40	7.9	10.35
N239	003	031	1973	5.8	6.3	4.42	7.9	10.35
N239	003	031	1973	4.3	4.8	6.80	7.9	10.35
N239	003	031	1973	3.6	4.1	7.25	7.9	10.35
N239	003	031	1973	2.8	3.3	8.08	7.9	10.35

Appendix 12. Sectional measurement data for Pigeon Valley. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	003	031	1973	2.0	2.5	9.05	7.9	10.35
N239	003	038	1973	21.4	26.2	0.00	21.6	16.45
N239	003	038	1973	19.8	23.9	0.70	21.6	16.45
N239	003	038	1973	16.2	19.0	2.71	21.6	16.45
N239	003	038	1973	14.7	16.5	3.75	21.6	16.45
N239	003	038	1973	12.7	14.0	5.30	21.6	16.45
N239	003	038	1973	10.4	11.4	8.11	21.6	16.45
N239	003	038	1973	7.9	8.9	10.36	21.6	16.45
N239	003	038	1973	5.3	6.3	12.77	21.6	16.45
N239	003	044	1973	21.7	25.7	0.00	21.1	14.93
N239	003	044	1973	20.3	23.4	0.70	21.1	14.93
N239	003	044	1973	18.9	21.1	1.40	21.1	14.93
N239	003	044	1973	17.2	19.0	2.44	21.1	14.93
N239	003	044	1973	9.9	10.9	7.62	21.1	14.93
N239	003	044	1973	5.0	5.8	9.60	21.1	14.93
N239	003	044	1973	2.8	3.3	11.55	21.1	14.93
N239	003	046	1973	7.5	8.1	0.00	7.1	8.77
N239	003	046	1973	7.0	7.6	0.70	7.1	8.77
N239	003	046	1973	6.6	7.1	1.40	7.1	8.77
N239	003	046	1973	5.8	6.3	2.99	7.1	8.77
N239	003	046	1973	5.1	5.6	4.02	7.1	8.77
N239	003	046	1973	4.3	4.8	5.15	7.1	8.77
N239	003	046	1973	3.8	4.1	6.00	7.1	8.77
N239	004	008	1973	24.3	28.7	0.00	23.1	16.36
N239	004	008	1973	22.3	25.9	0.70	23.1	16.36
N239	004	008	1973	18.6	20.6	2.44	23.1	16.36
N239	004	008	1973	16.5	18.0	3.69	23.1	16.36
N239	004	008	1973	14.2	15.5	5.58	23.1	16.36
N239	004	008	1973	9.4	10.4	9.63	23.1	16.36
N239	004	008	1973	6.9	7.9	11.58	23.1	16.36
N239	004	008	1973	4.3	5.3	13.41	23.1	16.36
N239	004	008	1973	2.3	2.8	15.36	23.1	16.36
N239	004	011	1973	9.3	11.4	0.00	9.4	11.85
N239	004	011	1973	8.9	10.4	0.70	9.4	11.85
N239	004	011	1973	8.6	9.4	1.40	9.4	11.85
N239	004	011	1973	7.4	7.9	3.44	9.4	11.85
N239	004	011	1973	6.6	7.1	4.94	9.4	11.85
N239	004	011	1973	5.1	5.6	7.50	9.4	11.85
N239	004	011	1973	4.3	4.8	8.23	9.4	11.85
N239	004	011	1973	3.6	4.1	8.87	9.4	11.85
N239	004	022	1973	13.3	15.7	0.00	14.7	12.30
N239	004	022	1973	13.0	15.2	0.70	14.7	12.30
N239	004	022	1973	12.8	14.7	1.40	14.7	12.30
N239	004	022	1973	12.2	13.5	2.29	14.7	12.30
N239	004	022	1973	11.2	12.2	3.11	14.7	12.30
N239	004	022	1973	10.1	10.9	4.85	14.7	12.30
N239	004	022	1973	7.6	8.4	7.53	14.7	12.30
N239	004	022	1973	6.3	7.1	8.41	14.7	12.30
N239	004	022	1973	5.3	5.8	8.84	14.7	12.30
N239	004	024	1973	9.4	10.7	0.00	9.1	10.00

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	004	024	1973	8.9	9.9	0.70	9.1	10.00
N239	004	024	1973	7.6	8.4	2.62	9.1	10.00
N239	004	024	1973	7.1	7.6	3.40	9.1	10.00
N239	004	024	1973	6.4	6.9	4.48	9.1	10.00
N239	004	024	1973	5.6	6.1	5.85	9.1	10.00
N239	004	024	1973	4.8	5.3	6.98	9.1	10.00
N239	004	024	1973	4.1	4.6	7.68	9.1	10.00
N239	004	026	1973	15.8	17.5	1.40	17.5	14.41
N239	004	026	1973	13.7	15.0	3.23	17.5	14.41
N239	004	026	1973	11.4	12.4	6.00	17.5	14.41
N239	004	026	1973	9.1	9.9	8.26	17.5	14.41
N239	004	026	1973	6.9	7.4	10.09	17.5	14.41
N239	004	026	1973	4.3	4.8	11.80	17.5	14.41
N239	004	026	1973	1.8	2.3	13.72	17.5	14.41
N239	004	032	1973	13.3	15.8	0.00	14.2	12.76
N239	004	032	1973	12.5	14.2	1.40	14.2	12.76
N239	004	032	1973	11.2	13.0	2.74	14.2	12.76
N239	004	032	1973	10.7	11.7	3.72	14.2	12.76
N239	004	032	1973	9.6	10.4	5.03	14.2	12.76
N239	004	032	1973	8.3	9.1	6.40	14.2	12.76
N239	004	032	1973	7.4	7.9	7.28	14.2	12.76
N239	004	032	1973	6.1	6.6	8.44	14.2	12.76
N239	004	032	1973	4.8	5.3	9.42	14.2	12.76
N239	004	042	1973	8.2	9.7	0.70	8.9	10.38
N239	004	042	1973	8.1	8.9	1.40	8.9	10.38
N239	004	042	1973	7.3	8.1	2.35	8.9	10.38
N239	004	042	1973	6.6	7.4	3.72	8.9	10.38
N239	004	042	1973	5.8	6.6	5.12	8.9	10.38
N239	004	042	1973	4.6	5.1	6.22	8.9	10.38
N239	004	042	1973	3.8	4.3	7.62	8.9	10.38
N239	004	042	1973	3.1	3.6	8.50	8.9	10.38
N239	004	048	1973	16.1	19.5	0.00	16.5	15.35
N239	004	048	1973	15.4	18.0	0.70	16.5	15.35
N239	004	048	1973	14.7	16.5	1.40	16.5	15.35
N239	004	048	1973	13.9	15.2	2.71	16.5	15.35
N239	004	048	1973	11.7	12.7	5.94	16.5	15.35
N239	004	048	1973	9.2	10.2	8.47	16.5	15.35
N239	004	048	1973	7.9	8.9	9.14	16.5	15.35
N239	004	048	1973	5.5	6.3	11.28	16.5	15.35
N239	004	048	1973	4.3	5.1	12.16	16.5	15.35
N239	004	048	1973	3.3	3.8	13.29	16.5	15.35
N239	004	059	1973	19.1	22.4	0.00	16.8	13.65
N239	004	059	1973	15.0	16.8	1.40	16.8	13.65
N239	004	059	1973	12.9	14.2	3.66	16.8	13.65
N239	004	059	1973	10.4	11.7	5.55	16.8	13.65
N239	004	059	1973	7.8	9.1	7.68	16.8	13.65
N239	004	059	1973	5.6	6.6	10.09	16.8	13.65
N239	004	059	1973	1.2	1.5	13.11	16.8	13.65
N239	005	001	1973	16.4	19.3	0.00	15.7	15.23
N239	005	001	1973	15.3	17.5	0.70	15.7	15.23

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	005	001	1973	14.1	15.7	1.40	15.7	15.23
N239	005	001	1973	9.9	10.7	7.19	15.7	15.23
N239	005	001	1973	8.6	9.4	8.99	15.7	15.23
N239	005	001	1973	7.3	8.1	10.45	15.7	15.23
N239	005	001	1973	6.4	6.9	11.09	15.7	15.23
N239	005	001	1973	5.1	5.6	12.16	15.7	15.23
N239	005	001	1973	3.8	4.3	13.26	15.7	15.23
N239	005	001	1973	2.7	3.0	14.78	15.7	15.23
N239	005	013	1973	8.8	10.1	0.00	9.7	11.51
N239	005	013	1973	8.9	9.9	0.70	9.7	11.51
N239	005	013	1973	8.9	9.7	1.40	9.7	11.51
N239	005	013	1973	8.1	8.9	2.68	9.7	11.51
N239	005	013	1973	7.3	8.1	3.63	9.7	11.51
N239	005	013	1973	6.1	6.6	5.76	9.7	11.51
N239	005	013	1973	5.3	5.8	6.58	9.7	11.51
N239	005	013	1973	4.6	5.1	7.44	9.7	11.51
N239	005	013	1973	3.8	4.3	8.32	9.7	11.51
N239	005	025	1973	16.0	20.4	0.00	18.8	14.75
N239	005	025	1973	15.2	18.8	1.40	18.8	14.75
N239	005	025	1973	14.1	16.3	2.38	18.8	14.75
N239	005	025	1973	12.4	13.7	4.11	18.8	14.75
N239	005	025	1973	10.2	11.2	7.01	18.8	14.75
N239	005	025	1973	7.8	8.6	9.81	18.8	14.75
N239	005	025	1973	5.3	6.1	11.86	18.8	14.75
N239	005	029	1973	14.1	15.9	0.00	13.5	13.10
N239	005	029	1973	13.0	14.7	0.70	13.5	13.10
N239	005	029	1973	10.9	12.2	3.32	13.5	13.10
N239	005	029	1973	9.9	10.9	4.48	13.5	13.10
N239	005	029	1973	8.7	9.7	6.10	13.5	13.10
N239	005	029	1973	7.4	8.4	7.16	13.5	13.10
N239	005	029	1973	6.3	7.1	8.66	13.5	13.10
N239	005	029	1973	3.8	4.6	10.55	13.5	13.10
N239	005	029	1973	2.8	3.3	11.73	13.5	13.10
N239	005	032	1973	15.7	18.6	0.00	17.0	14.32
N239	005	032	1973	15.1	17.8	0.70	17.0	14.32
N239	005	032	1973	14.6	17.0	1.40	17.0	14.32
N239	005	032	1973	13.8	15.7	2.16	17.0	14.32
N239	005	032	1973	10.9	11.9	5.46	17.0	14.32
N239	005	032	1973	9.7	10.7	6.92	17.0	14.32
N239	005	032	1973	8.4	9.4	7.99	17.0	14.32
N239	005	032	1973	7.1	8.1	9.05	17.0	14.32
N239	005	032	1973	6.1	6.9	10.33	17.0	14.32
N239	005	032	1973	3.8	4.3	12.16	17.0	14.32
N239	005	036	1973	9.4	11.0	0.00	9.4	13.16
N239	005	036	1973	8.9	10.2	0.70	9.4	13.16
N239	005	036	1973	8.4	9.4	1.40	9.4	13.16
N239	005	036	1973	7.8	8.6	2.71	9.4	13.16
N239	005	036	1973	7.1	7.9	5.12	9.4	13.16
N239	005	036	1973	5.8	6.3	7.77	9.4	13.16
N239	005	036	1973	5.1	5.6	8.81	9.4	13.16

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	005	036	1973	4.3	4.8	9.81	9.4	13.16
N239	005	036	1973	3.6	4.1	10.70	9.4	13.16
N239	005	043	1973	11.5	14.3	0.00	12.7	14.04
N239	005	043	1973	11.2	13.5	0.70	12.7	14.04
N239	005	043	1973	10.9	12.7	1.40	12.7	14.04
N239	005	043	1973	10.4	11.4	2.56	12.7	14.04
N239	005	043	1973	9.4	10.2	4.33	12.7	14.04
N239	005	043	1973	5.8	6.3	9.81	12.7	14.04
N239	005	043	1973	4.6	5.1	10.94	12.7	14.04
N239	005	043	1973	3.3	3.8	11.92	12.7	14.04
N239	005	043	1973	2.2	2.5	12.80	12.7	14.04
N239	005	053	1973	7.8	9.4	0.00	8.4	10.87
N239	005	053	1973	7.7	8.9	0.70	8.4	10.87
N239	005	053	1973	7.6	8.4	1.40	8.4	10.87
N239	005	053	1973	6.1	6.9	4.88	8.4	10.87
N239	005	053	1973	5.6	6.1	6.10	8.4	10.87
N239	005	053	1973	4.1	4.6	8.02	8.4	10.87
N239	005	053	1973	3.3	3.8	8.96	8.4	10.87
N239	005	053	1973	2.7	3.0	9.60	8.4	10.87
N239	005	054	1973	17.1	20.2	0.00	17.8	13.07
N239	005	054	1973	16.3	19.0	0.70	17.8	13.07
N239	005	054	1973	15.6	17.8	1.40	17.8	13.07
N239	005	054	1973	11.7	12.7	5.00	17.8	13.07
N239	005	054	1973	6.8	7.6	8.50	17.8	13.07
N239	005	054	1973	4.6	5.1	10.49	17.8	13.07
N239	005	054	1973	2.0	2.5	11.95	17.8	13.07
N239	006	002	1973	9.5	12.2	0.00	10.2	12.55
N239	006	002	1973	9.2	11.2	0.70	10.2	12.55
N239	006	002	1973	8.8	10.2	1.40	10.2	12.55
N239	006	002	1973	6.8	7.6	4.72	10.2	12.55
N239	006	002	1973	5.5	6.3	6.64	10.2	12.55
N239	006	002	1973	3.3	3.8	9.85	10.2	12.55
N239	006	002	1973	2.0	2.5	11.28	10.2	12.55
N239	006	006	1973	12.6	15.2	0.00	12.2	12.46
N239	006	006	1973	11.7	13.7	0.70	12.2	12.46
N239	006	006	1973	10.7	12.2	1.40	12.2	12.46
N239	006	006	1973	9.9	10.9	2.59	12.2	12.46
N239	006	006	1973	8.9	9.7	3.96	12.2	12.46
N239	006	006	1973	7.6	8.4	5.79	12.2	12.46
N239	006	006	1973	6.6	7.1	7.07	12.2	12.46
N239	006	006	1973	5.3	5.8	8.44	12.2	12.46
N239	006	017	1973	15.7	19.6	0.00	16.0	15.20
N239	006	017	1973	14.8	17.8	0.70	16.0	15.20
N239	006	017	1973	12.2	13.5	3.32	16.0	15.20
N239	006	017	1973	11.2	12.2	4.97	16.0	15.20
N239	006	017	1973	10.1	10.9	5.94	16.0	15.20
N239	006	017	1973	7.6	8.4	8.75	16.0	15.20
N239	006	017	1973	6.6	7.1	9.66	16.0	15.20
N239	006	017	1973	5.3	5.8	11.16	16.0	15.20
N239	006	017	1973	4.1	4.6	12.31	16.0	15.20

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	017	1973	3.0	3.3	12.98	16.0	15.20
N239	006	032	1973	15.1	18.1	0.00	14.5	13.19
N239	006	032	1973	13.9	16.3	0.70	14.5	13.19
N239	006	032	1973	12.7	14.5	1.40	14.5	13.19
N239	006	032	1973	11.9	13.2	2.19	14.5	13.19
N239	006	032	1973	10.6	11.9	3.47	14.5	13.19
N239	006	032	1973	9.7	10.7	4.75	14.5	13.19
N239	006	032	1973	8.4	9.4	6.37	14.5	13.19
N239	006	032	1973	6.1	6.9	8.90	14.5	13.19
N239	006	032	1973	3.8	4.3	10.73	14.5	13.19
N239	006	032	1973	2.5	3.0	11.61	14.5	13.19
N239	006	040	1973	8.6	10.8	0.00	8.6	10.93
N239	006	040	1973	8.1	9.7	0.70	8.6	10.93
N239	006	040	1973	7.6	8.6	1.40	8.6	10.93
N239	006	040	1973	7.1	7.9	2.65	8.6	10.93
N239	006	040	1973	5.8	6.3	5.03	8.6	10.93
N239	006	040	1973	4.3	4.8	7.28	8.6	10.93
N239	006	040	1973	3.8	4.1	7.77	8.6	10.93
N239	006	040	1973	3.0	3.3	8.50	8.6	10.93
N239	006	047	1973	15.7	18.5	0.00	16.5	13.75
N239	006	047	1973	15.1	17.5	0.70	16.5	13.75
N239	006	047	1973	14.5	16.5	1.40	16.5	13.75
N239	006	047	1973	13.7	15.2	2.01	16.5	13.75
N239	006	047	1973	12.7	14.0	3.17	16.5	13.75
N239	006	047	1973	10.4	11.4	5.70	16.5	13.75
N239	006	047	1973	7.9	8.9	7.92	16.5	13.75
N239	006	047	1973	6.8	7.6	8.66	16.5	13.75
N239	006	047	1973	5.5	6.3	9.88	16.5	13.75
N239	006	047	1973	4.3	5.1	10.64	16.5	13.75
N239	006	050	1973	11.0	13.0	0.00	10.4	9.07
N239	006	050	1973	10.2	11.7	0.70	10.4	9.07
N239	006	050	1973	9.4	10.4	1.40	10.4	9.07
N239	006	050	1973	7.1	7.9	3.69	10.4	9.07
N239	006	050	1973	6.1	6.6	5.00	10.4	9.07
N239	006	050	1973	3.6	4.1	7.01	10.4	9.07
N239	006	050	1973	2.5	2.8	7.80	10.4	9.07
N239	006	056	1973	17.2	20.3	0.00	17.3	14.38
N239	006	056	1973	16.2	18.8	0.70	17.3	14.38
N239	006	056	1973	14.2	16.0	2.19	17.3	14.38
N239	006	056	1973	13.2	14.7	3.29	17.3	14.38
N239	006	056	1973	11.2	12.2	5.76	17.3	14.38
N239	006	056	1973	9.9	10.9	6.61	17.3	14.38
N239	006	056	1973	8.7	9.7	7.62	17.3	14.38
N239	006	056	1973	7.6	8.4	8.78	17.3	14.38
N239	006	056	1973	6.3	7.1	9.72	17.3	14.38
N239	006	056	1973	5.3	6.1	10.64	17.3	14.38
N239	006	059	1973	21.1	25.2	0.00	21.6	15.08
N239	006	059	1973	20.0	23.4	0.70	21.6	15.08
N239	006	059	1973	18.9	21.6	1.40	21.6	15.08
N239	006	059	1973	17.2	19.0	2.62	21.6	15.08

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	059	1973	12.5	14.0	6.10	21.6	15.08
N239	006	059	1973	7.9	8.9	8.84	21.6	15.08
N239	006	059	1973	5.5	6.3	10.70	21.6	15.08
N239	006	059	1973	3.0	3.8	12.89	21.6	15.08
N239	001	008	1978	25.5	28.6	0.00	24.8	16.30
N239	001	008	1978	24.1	26.7	0.70	24.8	16.30
N239	001	008	1978	22.8	24.8	1.40	24.8	16.30
N239	001	008	1978	19.7	20.5	2.92	24.8	16.30
N239	001	008	1978	17.6	18.1	5.09	24.8	16.30
N239	001	008	1978	12.7	13.1	9.10	24.8	16.30
N239	001	008	1978	10.9	11.2	10.46	24.8	16.30
N239	001	008	1978	7.6	7.8	12.22	24.8	16.30
N239	001	008	1978	6.0	6.2	13.28	24.8	16.30
N239	001	037	1978	23.8	29.1	0.00	23.5	17.46
N239	001	037	1978	19.5	23.5	1.40	23.5	17.46
N239	001	037	1978	19.7	21.2	2.42	23.5	17.46
N239	001	037	1978	16.1	16.5	7.58	23.5	17.46
N239	001	037	1978	13.9	14.3	9.68	23.5	17.46
N239	001	037	1978	10.6	11.0	11.84	23.5	17.46
N239	001	037	1978	9.2	9.4	12.85	23.5	17.46
N239	001	037	1978	6.7	6.9	14.58	23.5	17.46
N239	001	050	1978	27.8	31.1	0.70	30.5	20.23
N239	001	050	1978	23.2	24.0	4.61	30.5	20.23
N239	001	050	1978	18.5	19.3	9.06	30.5	20.23
N239	001	050	1978	14.2	14.9	12.68	30.5	20.23
N239	001	050	1978	9.5	9.8	15.64	30.5	20.23
N239	001	050	1978	4.5	4.7	17.61	30.5	20.23
N239	001	059	1978	31.3	36.0	0.70	31.1	14.75
N239	001	059	1978	27.1	31.1	1.40	31.1	14.75
N239	001	059	1978	25.0	26.4	2.75	31.1	14.75
N239	001	059	1978	20.1	21.1	6.46	31.1	14.75
N239	001	059	1978	11.9	12.9	11.35	31.1	14.75
N239	001	059	1978	6.3	6.9	11.78	31.1	14.75
N239	001	999	1978	26.7	32.2	0.00	29.0	20.67
N239	001	999	1978	26.0	29.0	1.40	29.0	20.67
N239	001	999	1978	22.3	23.6	4.18	29.0	20.67
N239	001	999	1978	18.1	18.7	8.89	29.0	20.67
N239	001	999	1978	13.8	14.2	12.85	29.0	20.67
N239	001	999	1978	4.5	4.7	18.31	29.0	20.67
N239	002	003	1978	21.4	24.6	0.00	20.4	16.35
N239	002	003	1978	20.1	22.5	0.70	20.4	16.35
N239	002	003	1978	18.8	20.4	1.40	20.4	16.35
N239	002	003	1978	17.5	18.0	3.00	20.4	16.35
N239	002	003	1978	14.6	15.0	5.66	20.4	16.35
N239	002	003	1978	10.1	10.5	10.47	20.4	16.35
N239	002	003	1978	7.2	7.6	12.18	20.4	16.35
N239	002	017	1978	29.9	35.2	0.00	28.6	19.61
N239	002	017	1978	26.0	28.6	1.40	28.6	19.61
N239	002	017	1978	22.8	23.9	4.21	28.6	19.61
N239	002	017	1978	18.3	18.8	9.00	28.6	19.61

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	002	017	1978	13.3	13.7	12.43	28.6	19.61
N239	002	017	1978	8.5	8.7	15.27	28.6	19.61
N239	002	050	1978	29.8	34.2	0.00	27.8	19.03
N239	002	050	1978	27.2	31.0	0.70	27.8	19.03
N239	002	050	1978	24.6	27.8	1.40	27.8	19.03
N239	002	050	1978	21.1	22.7	3.49	27.8	19.03
N239	002	050	1978	16.9	17.7	8.17	27.8	19.03
N239	002	050	1978	12.7	13.1	12.60	27.8	19.03
N239	002	053	1978	28.3	32.9	0.00	28.9	16.82
N239	002	053	1978	26.6	30.9	0.70	28.9	16.82
N239	002	053	1978	24.9	28.9	1.40	28.9	16.82
N239	002	053	1978	21.9	23.7	3.39	28.9	16.82
N239	002	053	1978	13.2	13.9	10.44	28.9	16.82
N239	002	053	1978	8.1	8.5	13.18	28.9	16.82
N239	002	999	1978	20.4	25.8	0.00	21.2	19.06
N239	002	999	1978	18.2	21.2	1.40	21.2	19.06
N239	002	999	1978	17.3	18.3	3.26	21.2	19.06
N239	002	999	1978	13.0	13.5	10.33	21.2	19.06
N239	002	999	1978	11.1	11.5	11.89	21.2	19.06
N239	002	999	1978	8.4	8.8	13.93	21.2	19.06
N239	002	999	1978	5.7	5.9	15.65	21.2	19.06
N239	003	003	1978	17.5	20.9	0.70	19.2	15.81
N239	003	003	1978	16.6	19.2	1.40	19.2	15.81
N239	003	003	1978	13.6	14.0	6.30	19.2	15.81
N239	003	003	1978	11.1	11.5	9.16	19.2	15.81
N239	003	003	1978	9.0	9.4	10.66	19.2	15.81
N239	003	003	1978	6.1	6.3	12.93	19.2	15.81
N239	003	030	1978	20.9	24.8	0.70	22.5	21.78
N239	003	030	1978	19.5	22.5	1.40	22.5	21.78
N239	003	030	1978	18.5	19.1	3.53	22.5	21.78
N239	003	030	1978	17.0	17.6	6.56	22.5	21.78
N239	003	030	1978	14.4	15.0	10.34	22.5	21.78
N239	003	030	1978	9.7	10.1	15.34	22.5	21.78
N239	003	030	1978	6.9	7.1	17.39	22.5	21.78
N239	003	030	1978	4.8	5.0	18.98	22.5	21.78
N239	003	040	1978	18.8	22.4	0.00	18.6	16.02
N239	003	040	1978	17.5	20.5	0.70	18.6	16.02
N239	003	040	1978	16.2	18.6	1.40	18.6	16.02
N239	003	040	1978	14.7	16.1.	2.73	18.6	16.02
N239	003	040	1978	13.0	13.5	5.27	18.6	16.02
N239	003	040	1978	5.9	6.1	12.62	18.6	16.02
N239	003	043	1978	23.7	26.8	0.00	23.6	17.51
N239	003	043	1978	22.2	25.2	0.70	23.6	17.51
N239	003	043	1978	20.8	23.6	1.40	23.6	17.51
N239	003	043	1978	18.4	20.9	2.14	23.6	17.51
N239	003	043	1978	14.5	14.9	7.45	23.6	17.51
N239	003	043	1978	12.3	12.7	9.66	23.6	17.51
N239	003	043	1978	10.9	11.3	10.84	23.6	17.51
N239	003	043	1978	8.7	9.0	12.73	23.6	17.51
N239	003	057	1978	23.8	28.8	0.00	22.4	16.52

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	003	057	1978	21.4	25.6	0.70	22.4	16.52
N239	003	057	1978	19.1	22.4	1.40	22.4	16.52
N239	003	057	1978	16.4	17.2	5.03	22.4	16.52
N239	003	057	1978	11.9	12.3	9.44	22.4	16.52
N239	003	057	1978	9.8	10.2	10.97	22.4	16.52
N239	003	057	1978	7.2	7.6	12.62	22.4	16.52
N239	003	057	1978	4.8	5.0	14.44	22.4	16.52
N239	004	005	1978	31.0	36.7	0.00	28.7	21.67
N239	004	005	1978	27.6	32.7	0.70	28.7	21.67
N239	004	005	1978	21.5	23.9	3.92	28.7	21.67
N239	004	005	1978	18.4	19.1	7.34	28.7	21.67
N239	004	005	1978	13.7	14.1	12.01	28.7	21.67
N239	004	005	1978	4.2	4.4	19.44	28.7	21.67
N239	004	020	1978	31.3	35.1	0.00	29.3	22.18
N239	004	020	1978	29.0	32.2	0.70	29.3	22.18
N239	004	020	1978	26.7	29.3	1.40	29.3	22.18
N239	004	020	1978	23.7	24.7	4.44	29.3	22.18
N239	004	020	1978	18.2	18.9	10.03	29.3	22.18
N239	004	020	1978	9.1	9.5	15.98	29.3	22.18
N239	004	025	1978	17.7	25.1	0.00	21.1	17.54
N239	004	025	1978	18.7	21.1	1.40	21.1	17.54
N239	004	025	1978	17.3	18.3	3.41	21.1	17.54
N239	004	025	1978	16.0	16.8	5.51	21.1	17.54
N239	004	025	1978	13.3	13.9	8.72	21.1	17.54
N239	004	025	1978	10.7	11.2	11.12	21.1	17.54
N239	004	025	1978	5.7	5.9	14.70	21.1	17.54
N239	004	027	1978	27.7	31.0	0.00	26.4	21.26
N239	004	027	1978	25.8	28.7	0.70	26.4	21.26
N239	004	027	1978	23.9	26.4	1.40	26.4	21.26
N239	004	027	1978	20.6	21.4	4.06	26.4	21.26
N239	004	027	1978	15.6	16.0	10.43	26.4	21.26
N239	004	027	1978	11.2	11.4	14.16	26.4	21.26
N239	004	033	1978	20.0	24.6	0.00	20.4	17.66
N239	004	033	1978	17.4	20.4	1.40	20.4	17.66
N239	004	033	1978	16.3	18.4	2.46	20.4	17.66
N239	004	033	1978	15.1	15.7	3.87	20.4	17.66
N239	004	033	1978	12.6	13.0	7.44	20.4	17.66
N239	004	033	1978	10.3	10.7	11.22	20.4	17.66
N239	004	033	1978	5.2	5.4	15.96	20.4	17.66
N239	005	006	1978	15.3	17.3	0.70	16.1	15.33
N239	005	006	1978	14.5	16.1	1.40	16.1	15.33
N239	005	006	1978	13.2	13.6	3.60	16.1	15.33
N239	005	006	1978	10.8	11.2	7.07	16.1	15.33
N239	005	006	1978	8.2	8.5	10.42	16.1	15.33
N239	005	006	1978	5.8	6.0	12.36	16.1	15.33
N239	005	018	1978	16.5	19.3	0.70	18.0	17.53
N239	005	018	1978	16.0	18.0	1.40	18.0	17.53
N239	005	018	1978	14.7	15.5	2.75	18.0	17.53
N239	005	018	1978	12.7	13.1	5.84	18.0	17.53
N239	005	018	1978	7.9	8.1	11.79	18.0	17.53

Appendix 12. Sectional measurement data for Pigeon Valley. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	005	018	1978	5.2	5.4	14.16	18.0	17.53
N239	005	023	1978	23.3	26.7	0.00	23.5	19.46
N239	005	023	1978	22.3	25.1	0.70	23.5	19.46
N239	005	023	1978	21.3	23.5	1.40	23.5	19.46
N239	005	023	1978	18.0	18.5	4.40	23.5	19.46
N239	005	023	1978	15.3	15.8	7.89	23.5	19.46
N239	005	023	1978	14.2	14.6	9.66	23.5	19.46
N239	005	023	1978	8.5	8.7	14.06	23.5	19.46
N239	005	023	1978	5.5	5.7	16.23	23.5	19.46
N239	005	031	1978	24.9	27.2	0.00	23.8	18.03
N239	005	031	1978	23.2	25.5	0.70	23.8	18.03
N239	005	031	1978	21.5	23.8	1.40	23.8	18.03
N239	005	031	1978	20.0	20.9	2.82	23.8	18.03
N239	005	031	1978	18.5	19.1	4.74	23.8	18.03
N239	005	031	1978	13.1	13.5	10.51	23.8	18.03
N239	005	031	1978	11.1	11.3	11.50	23.8	18.03
N239	005	031	1978	5.3	5.5	15.93	23.8	18.03
N239	005	035	1978	20.9	25.0	0.70	23.1	18.92
N239	005	035	1978	20.0	23.1	1.40	23.1	18.92
N239	005	035	1978	18.8	21.2	3.16	23.1	18.92
N239	005	035	1978	16.9	18.0	5.53	23.1	18.92
N239	005	035	1978	14.6	15.4	7.09	23.1	18.92
N239	005	035	1978	12.7	13.1	9.79	23.1	18.92
N239	005	035	1978	9.8	10.2	12.18	23.1	18.92
N239	005	035	1978	8.0	8.2	13.76	23.1	18.92
N239	006	014	1978	14.0	16.3	0.70	15.5	15.43
N239	006	014	1978	13.5	15.5	1.40	15.5	15.43
N239	006	014	1978	12.6	13.0	3.08	15.5	15.43
N239	006	014	1978	9.9	10.3	7.14	15.5	15.43
N239	006	014	1978	7.8	8.0	9.70	15.5	15.43
N239	006	014	1978	5.3	5.5	11.96	15.5	15.43
N239	006	018	1978	20.4	23.8	0.00	20.4	18.36
N239	006	018	1978	16.4	17.9	3.55	20.4	18.36
N239	006	018	1978	14.7	15.2	5.66	20.4	18.36
N239	006	018	1978	12.5	12.9	8.85	20.4	18.36
N239	006	018	1978	10.2	10.4	11.62	20.4	18.36
N239	006	018	1978	7.5	7.7	13.85	20.4	18.36
N239	006	018	1978	4.8	5.0	15.93	20.4	18.36
N239	006	042	1978	14.7	17.3	0.00	15.3	14.79
N239	006	042	1978	14.2	16.3	0.70	15.3	14.79
N239	006	042	1978	12.1	12.5	3.25	15.3	14.79
N239	006	042	1978	9.8	10.2	7.29	15.3	14.79
N239	006	042	1978	7.6	7.8	10.16	15.3	14.79
N239	006	042	1978	5.3	5.5	12.14	15.3	14.79
N239	006	999	1978	19.8	25.2	0.00	20.4	18.51
N239	006	999	1978	18.8	22.8	0.70	20.4	18.51
N239	006	999	1978	17.8	20.4	1.40	20.4	18.51
N239	006	999	1978	16.1	17.1	3.23	20.4	18.51
N239	006	999	1978	14.7	15.1	4.93	20.4	18.51
N239	006	999	1978	7.8	8.0	13.13	20.4	18.51

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	999	1978	5.1	5.3	15.42	20.4	18.51
N239	006	199	1978	20.2	24.8	0.00	21.6	19.97
N239	006	199	1978	19.6	23.2	0.70	21.6	19.97
N239	006	199	1978	19.0	21.6	1.40	21.6	19.97
N239	006	199	1978	17.4	19.4	2.61	21.6	19.97
N239	006	199	1978	15.7	16.3	4.80	21.6	19.97
N239	006	199	1978	13.4	13.8	8.67	21.6	19.97
N239	006	199	1978	6.4	6.6	15.94	21.6	19.97
N239	001	004	1982	34.2	41.9	0.00	34.3	23.50
N239	001	004	1982	30.3	34.3	1.40	34.3	23.50
N239	001	004	1982	26.8	27.4	3.13	34.3	23.50
N239	001	004	1982	18.9	19.7	10.48	34.3	23.50
N239	001	004	1982	13.5	14.2	14.76	34.3	23.50
N239	001	004	1982	8.7	9.2	17.55	34.3	23.50
N239	001	012	1982	39.6	45.6	0.00	36.0	22.70
N239	001	012	1982	35.6	40.8	0.70	36.0	22.70
N239	001	012	1982	31.7	36.0	1.40	36.0	22.70
N239	001	012	1982	27.4	30.2	3.23	36.0	22.70
N239	001	012	1982	20.0	20.9	9.65	36.0	22.70
N239	001	012	1982	15.4	16.1	13.90	36.0	22.70
N239	001	012	1982	11.1	11.5	16.51	36.0	22.70
N239	001	031	1982	36.1	42.3	0.00	34.7	24.29
N239	001	031	1982	33.6	38.5	0.70	34.7	24.29
N239	001	031	1982	28.1	29.5	4.07	34.7	24.29
N239	001	031	1982	19.2	19.6	13.70	34.7	24.29
N239	001	031	1982	14.1	14.5	17.31	34.7	24.29
N239	001	031	1982	8.5	8.9	20.09	34.7	24.29
N239	001	035	1982	39.9	46.5	0.00	39.3	24.87
N239	001	035	1982	37.5	42.9	0.70	39.3	24.87
N239	001	035	1982	35.0	39.3	1.40	39.3	24.87
N239	001	035	1982	31.9	34.4	3.53	39.3	24.87
N239	001	035	1982	27.9	29.0	6.21	39.3	24.87
N239	001	035	1982	23.2	24.3	10.10	39.3	24.87
N239	001	035	1982	9.0	9.4	20.87	39.3	24.87
N239	002	006	1982	30.9	34.4	0.00	29.0	19.73
N239	002	006	1982	28.5	31.7	0.70	29.0	19.73
N239	002	006	1982	22.9	24.2	4.27	29.0	19.73
N239	002	006	1982	18.7	19.3	9.27	29.0	19.73
N239	002	006	1982	13.9	14.3	13.85	29.0	19.73
N239	002	006	1982	9.3	9.5	14.73	29.0	19.73
N239	002	015	1982	39.3	45.2	0.00	39.0	22.47
N239	002	015	1982	35.7	39.0	1.40	39.0	22.47
N239	002	015	1982	31.9	34.4	3.46	39.0	22.47
N239	002	015	1982	27.5	28.7	7.00	39.0	22.47
N239	002	015	1982	22.8	23.7	11.00	39.0	22.47
N239	002	015	1982	18.2	19.0	13.85	39.0	22.47
N239	002	015	1982	8.2	8.6	20.07	39.0	22.47
N239	002	042	1982	27.3	34.9	0.00	28.9	21.80
N239	002	042	1982	25.6	31.9	0.70	28.9	21.80
N239	002	042	1982	24.0	28.9	1.40	28.9	21.80

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	002	042	1982	20.9	24.2	3.40	28.9	21.80
N239	002	042	1982	13.3	13.8	13.72	28.9	21.80
N239	002	042	1982	8.3	8.7	17.75	28.9	21.80
N239	002	053	1982	36.6	44.3	0.00	37.7	20.13
N239	002	053	1982	35.0	41.0	0.70	37.7	20.13
N239	002	053	1982	24.8	27.3	7.14	37.7	20.13
N239	002	053	1982	21.2	22.7	9.83	37.7	20.13
N239	002	053	1982	17.0	17.6	12.54	37.7	20.13
N239	002	053	1982	12.0	12.4	15.23	37.7	20.13
N239	002	053	1982	7.6	7.8	17.13	37.7	20.13
N239	003	023	1982	28.9	34.2	0.00	28.4	22.81
N239	003	023	1982	26.9	31.3	0.70	28.4	22.81
N239	003	023	1982	24.9	28.4	1.40	28.4	22.81
N239	003	023	1982	22.8	23.6	4.41	28.4	22.81
N239	003	023	1982	18.0	18.6	10.33	28.4	22.81
N239	003	023	1982	12.9	13.2	15.07	28.4	22.81
N239	003	030	1982	27.2	33.6	0.00	29.2	23.20
N239	003	030	1982	24.7	29.2	1.40	29.2	23.20
N239	003	030	1982	22.6	24.3	4.04	29.2	23.20
N239	003	030	1982	18.7	19.3	9.40	29.2	23.20
N239	003	030	1982	13.8	14.3	15.12	29.2	23.20
N239	003	030	1982	9.5	9.7	18.17	29.2	23.20
N239	003	003	1982	22.7	26.8	0.00	22.8	15.20
N239	003	003	1982	20.9	24.8	0.70	22.8	15.20
N239	003	003	1982	19.1	22.8	1.40	22.8	15.20
N239	003	003	1982	17.9	19.9	3.55	22.8	15.20
N239	003	003	1982	14.4	15.0	7.55	22.8	15.20
N239	003	003	1982	12.2	12.6	9.95	22.8	15.20
N239	003	003	1982	7.2	7.4	12.74	22.8	15.20
N239	003	014	1982	23.7	29.4	0.00	25.0	18.10
N239	003	014	1982	22.1	27.2	0.70	25.0	18.10
N239	003	014	1982	20.6	25.0	1.40	25.0	18.10
N239	003	014	1982	19.2	20.0	3.46	25.0	18.10
N239	003	014	1982	14.4	15.2	9.04	25.0	18.10
N239	003	014	1982	9.4	10.0	13.30	25.0	18.10
N239	004	003	1982	31.4	35.7	0.00	29.3	23.60
N239	004	003	1982	26.9	29.3	1.40	29.3	23.60
N239	004	003	1982	19.1	19.7	10.26	29.3	23.60
N239	004	003	1982	13.9	14.3	15.42	29.3	23.60
N239	004	003	1982	10.1	10.3	18.48	29.3	23.60
N239	004	003	1982	8.1	8.3	19.63	29.3	23.60
N239	004	020	1982	36.9	41.5	0.70	38.7	25.58
N239	004	020	1982	35.2	38.7	1.40	38.7	25.58
N239	004	020	1982	27.4	28.7	7.94	38.7	25.58
N239	004	020	1982	23.3	23.9	12.17	38.7	25.58
N239	004	020	1982	18.2	18.7	16.28	38.7	25.58
N239	004	020	1982	13.3	13.7	19.34	38.7	25.58
N239	004	020	1982	8.0	8.3	22.78	38.7	25.58
N239	004	046	1982	32.8	37.8	0.00	32.6	21.10
N239	004	046	1982	30.8	35.2	0.70	32.6	21.10

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	004	046	1982	28.8	32.6	1.40	32.6	21.10
N239	004	046	1982	21.8	22.8	7.56	32.6	21.10
N239	004	046	1982	16.9	17.5	11.32	32.6	21.10
N239	004	046	1982	7.2	7.4	18.27	32.6	21.10
N239	004	056	1982	29.2	33.8	0.00	29.8	23.80
N239	004	056	1982	27.8	31.8	0.70	29.8	23.80
N239	004	056	1982	23.8	24.8	4.06	29.8	23.80
N239	004	056	1982	19.4	19.8	10.27	29.8	23.80
N239	004	056	1982	14.7	15.1	14.95	29.8	23.80
N239	004	056	1982	9.2	9.4	19.74	29.8	23.80
N239	005	006	1982	20.7	25.7	0.00	21.3	18.67
N239	005	006	1982	18.9	21.3	1.40	21.3	18.67
N239	005	006	1982	17.9	18.8	3.10	21.3	18.67
N239	005	006	1982	15.9	16.3	6.38	21.3	18.67
N239	005	006	1982	10.9	11.1	12.39	21.3	18.67
N239	005	006	1982	8.1	8.3	14.47	21.3	18.67
N239	005	012	1982	32.7	36.7	0.00	31.5	25.54
N239	005	012	1982	28.3	31.5	1.40	31.5	25.54
N239	005	012	1982	25.3	26.3	4.34	31.5	25.54
N239	005	012	1982	21.2	21.8	9.86	31.5	25.54
N239	005	012	1982	15.6	16.0	15.97	31.5	25.54
N239	005	012	1982	8.2	8.4	21.54	31.5	25.54
N239	005	031	1982	29.7	35.1	0.00	31.1	24.62
N239	005	031	1982	28.7	33.1	0.70	31.1	24.62
N239	005	031	1982	27.7	31.1	1.40	31.1	24.62
N239	005	031	1982	20.8	21.5	8.91	31.1	24.62
N239	005	031	1982	15.6	16.1	13.37	31.1	24.62
N239	005	031	1982	7.0	7.4	19.12	31.1	24.62
N239	005	057	1982	25.2	29.6	0.00	24.0	19.55
N239	005	057	1982	23.2	26.8	0.70	24.0	19.55
N239	005	057	1982	19.7	21.6	2.69	24.0	19.55
N239	005	057	1982	15.7	16.1	8.76	24.0	19.55
N239	005	057	1982	13.2	13.6	11.23	24.0	19.55
N239	005	057	1982	11.4	11.6	12.94	24.0	19.55
N239	005	057	1982	8.4	8.6	15.25	24.0	19.55
N239	006	027	1982	22.3	29.4	0.00	23.0	17.48
N239	006	027	1982	20.6	26.2	0.70	23.0	17.48
N239	006	027	1982	19.0	23.0	1.40	23.0	17.48
N239	006	027	1982	15.1	15.7	6.75	23.0	17.48
N239	006	027	1982	12.7	13.3	10.25	23.0	17.48
N239	006	027	1982	10.1	10.5	12.89	23.0	17.48
N239	006	027	1982	7.7	7.9	14.98	23.0	17.48
N239	006	031	1982	25.4	31.5	0.00	25.7	20.55
N239	006	031	1982	23.7	28.6	0.70	25.7	20.55
N239	006	031	1982	22.1	25.7	1.40	25.7	20.55
N239	006	031	1982	19.7	20.9	4.51	25.7	20.55
N239	006	031	1982	10.3	10.5	14.13	25.7	20.55
N239	006	031	1982	6.6	6.8	17.33	25.7	20.55
N239	006	041	1982	21.5	27.3	0.00	23.1	19.20
N239	006	041	1982	20.7	25.2	0.70	23.1	19.20

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	041	1982	18.9	20.6	3.08	23.1	19.20
N239	006	041	1982	15.1	15.5	8.51	23.1	19.20
N239	006	041	1982	13.0	13.3	10.84	23.1	19.20
N239	006	041	1982	10.1	10.3	13.44	23.1	19.20
N239	006	041	1982	7.8	8.0	15.30	23.1	19.20
N239	006	048	1982	23.9	28.9	0.00	25.5	22.45
N239	006	048	1982	23.0	27.2	0.70	25.5	22.45
N239	006	048	1982	22.2	25.5	1.40	25.5	22.45
N239	006	048	1982	19.3	20.4	4.60	25.5	22.45
N239	006	048	1982	10.0	10.4	16.20	25.5	22.45
N239	006	048	1982	8.2	8.4	17.45	25.5	22.45
N392	011	001	1974	15.5	16.8	0.00	12.8	7.99
N392	011	001	1974	13.7	14.8	0.70	12.8	7.99
N392	011	001	1974	11.9	12.8	1.40	12.8	7.99
N392	011	001	1974	10.0	10.8	2.75	12.8	7.99
N392	011	001	1974	9.0	9.8	3.28	12.8	7.99
N392	011	001	1974	8.0	8.8	3.56	12.8	7.99
N392	011	001	1974	7.1	7.8	3.97	12.8	7.99
N392	011	001	1974	5.0	5.8	5.25	12.8	7.99
N392	011	002	1974	11.6	12.5	0.70	11.0	7.24
N392	011	002	1974	9.2	10.0	2.13	11.0	7.24
N392	011	002	1974	8.2	9.0	2.45	11.0	7.24
N392	011	002	1974	7.3	8.0	2.98	11.0	7.24
N392	011	002	1974	6.2	7.0	3.81	11.0	7.24
N392	011	002	1974	5.3	6.0	4.32	11.0	7.24
N392	011	002	1974	4.4	5.0	4.80	11.0	7.24
N392	011	016	1974	6.8	7.3	0.00	6.5	4.38
N392	011	016	1974	6.4	6.9	0.70	6.5	4.38
N392	011	016	1974	5.6	6.0	1.66	6.5	4.38
N392	011	016	1974	5.1	5.5	2.04	6.5	4.38
N392	011	016	1974	4.6	5.0	2.31	6.5	4.38
N392	011	017	1974	8.0	8.5	0.00	7.1	5.07
N392	011	017	1974	7.3	7.8	0.70	7.1	5.07
N392	011	017	1974	6.5	7.1	1.40	7.1	5.07
N392	011	017	1974	6.0	6.6	1.48	7.1	5.07
N392	011	017	1974	5.0	5.6	2.15	7.1	5.07
N392	011	017	1974	4.6	5.1	2.61	7.1	5.07
N392	011	034	1974	7.4	8.0	0.00	7.4	5.48
N392	011	034	1974	7.0	7.4	1.40	7.4	5.48
N392	011	034	1974	6.5	6.9	1.71	7.4	5.48
N392	011	034	1974	6.0	6.4	1.95	7.4	5.48
N392	011	034	1974	5.5	5.9	2.50	7.4	5.48
N392	011	034	1974	5.0	5.4	2.69	7.4	5.48
N392	011	059	1974	12.7	13.7	0.00	10.5	7.01
N392	011	059	1974	9.9	10.5	1.40	10.5	7.01
N392	011	059	1974	8.9	9.5	1.93	10.5	7.01
N392	011	059	1974	7.9	8.5	3.10	10.5	7.01
N392	011	059	1974	6.5	7.0	3.50	10.5	7.01
N392	011	059	1974	6.0	6.5	3.95	10.5	7.01
N392	012	003	1974	9.9	10.5	0.00	9.5	6.09

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	012	003	1974	9.4	10.0	0.70	9.5	6.09
N392	012	003	1974	8.9	9.5	1.40	9.5	6.09
N392	012	003	1974	7.0	7.5	2.38	9.5	6.09
N392	012	003	1974	5.9	6.5	3.11	9.5	6.09
N392	012	003	1974	5.1	5.5	3.21	9.5	6.09
N392	012	032	1974	10.8	11.5	0.00	10.5	6.74
N392	012	032	1974	10.2	11.0	0.70	10.5	6.74
N392	012	032	1974	9.6	10.5	1.40	10.5	6.74
N392	012	032	1974	8.7	9.5	1.83	10.5	6.74
N392	012	032	1974	7.8	8.5	2.65	10.5	6.74
N392	012	032	1974	6.0	6.5	4.42	10.5	6.74
N392	012	046	1974	11.6	12.6	0.00	10.8	7.61
N392	012	046	1974	10.7	11.7	0.70	10.8	7.61
N392	012	046	1974	9.9	10.8	1.40	10.8	7.61
N392	012	046	1974	8.9	9.8	1.77	10.8	7.61
N392	012	046	1974	5.8	6.8	3.92	10.8	7.61
N392	012	046	1974	5.0	5.8	4.45	10.8	7.61
N392	012	047	1974	5.8	6.2	0.70	5.8	4.59
N392	012	047	1974	5.3	5.8	1.40	5.8	4.59
N392	012	047	1974	4.8	5.3	1.81	5.8	4.59
N392	012	047	1974	4.3	4.8	2.14	5.8	4.59
N392	012	053	1974	6.3	6.8	0.00	6.2	4.99
N392	012	053	1974	6.1	6.5	0.70	6.2	4.99
N392	012	053	1974	5.7	6.2	1.40	6.2	4.99
N392	012	053	1974	5.3	5.7	1.85	6.2	4.99
N392	012	055	1974	6.7	7.1	0.00	6.5	4.78
N392	012	055	1974	6.4	6.8	0.70	6.5	4.78
N392	012	055	1974	6.1	6.5	1.40	6.5	4.78
N392	012	055	1974	5.5	6.0	1.44	6.5	4.78
N392	012	055	1974	4.6	5.0	2.01	6.5	4.78
N392	013	006	1974	7.5	8.1	0.00	5.9	4.72
N392	013	006	1974	6.5	7.0	0.70	5.9	4.72
N392	013	006	1974	5.4	5.9	1.40	5.9	4.72
N392	013	006	1974	4.4	4.9	2.31	5.9	4.72
N392	013	011	1974	8.3	9.0	0.00	6.8	5.42
N392	013	011	1974	7.3	7.9	0.70	6.8	5.42
N392	013	011	1974	6.3	6.8	1.40	6.8	5.42
N392	013	011	1974	5.3	5.8	2.10	6.8	5.42
N392	013	011	1974	4.8	5.3	2.65	6.8	5.42
N392	013	012	1974	11.7	13.6	0.00	11.6	8.14
N392	013	012	1974	10.7	11.6	1.40	11.6	8.14
N392	013	012	1974	9.7	10.6	1.70	11.6	8.14
N392	013	012	1974	8.8	9.6	2.39	11.6	8.14
N392	013	012	1974	8.0	8.6	3.00	11.6	8.14
N392	013	012	1974	6.8	7.6	3.89	11.6	8.14
N392	013	012	1974	6.0	6.6	4.63	11.6	8.14
N392	013	021	1974	8.5	9.2	0.00	7.0	5.34
N392	013	021	1974	7.5	8.1	0.70	7.0	5.34
N392	013	021	1974	6.6	7.0	1.40	7.0	5.34
N392	013	021	1974	6.1	6.5	1.77	7.0	5.34

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	013	021	1974	5.6	6.0	2.15	7.0	5.34
N392	013	021	1974	5.0	5.5	2.68	7.0	5.34
N392	013	035	1974	13.3	14.8	0.00	11.2	6.74
N392	013	035	1974	11.9	13.0	0.70	11.2	6.74
N392	013	035	1974	8.4	9.2	2.70	11.2	6.74
N392	013	035	1974	7.0	7.8	3.50	11.2	6.74
N392	013	035	1974	6.5	7.2	3.85	11.2	6.74
N392	013	035	1974	5.5	6.2	4.40	11.2	6.74
N392	013	035	1974	4.6	5.2	5.08	11.2	6.74
N392	013	036	1974	10.4	11.4	0.70	10.2	7.11
N392	013	036	1974	9.3	10.2	1.40	10.2	7.11
N392	013	036	1974	8.4	9.2	2.27	10.2	7.11
N392	013	036	1974	7.4	8.2	3.29	10.2	7.11
N392	013	036	1974	5.4	6.2	4.75	10.2	7.11
N392	013	036	1974	4.6	5.2	5.30	10.2	7.11
N392	014	036	1974	6.1	6.7	0.70	6.1	5.04
N392	014	036	1974	5.5	6.1	1.40	6.1	5.04
N392	014	036	1974	5.0	5.6	1.80	6.1	5.04
N392	014	036	1974	4.5	5.1	2.32	6.1	5.04
N392	014	044	1974	11.4	12.5	0.00	11.5	7.81
N392	014	044	1974	11.0	12.0	0.70	11.5	7.81
N392	014	044	1974	9.7	10.5	1.83	11.5	7.81
N392	014	044	1974	8.7	9.5	2.50	11.5	7.81
N392	014	044	1974	7.8	8.5	3.35	11.5	7.81
N392	014	044	1974	5.9	6.5	4.50	11.5	7.81
N392	014	044	1974	4.9	5.5	5.26	11.5	7.81
N392	014	046	1974	14.2	15.3	0.00	11.7	6.87
N392	014	046	1974	12.5	13.5	0.70	11.7	6.87
N392	014	046	1974	10.8	11.7	1.40	11.7	6.87
N392	014	046	1974	8.8	9.7	2.80	11.7	6.87
N392	014	046	1974	7.9	8.7	3.08	11.7	6.87
N392	014	046	1974	6.9	7.7	3.18	11.7	6.87
N392	014	046	1974	5.0	5.7	4.40	11.7	6.87
N392	014	049	1974	7.2	7.9	0.00	6.7	5.54
N392	014	049	1974	6.6	7.3	0.70	6.7	5.54
N392	014	049	1974	6.1	6.7	1.40	6.7	5.54
N392	014	049	1974	5.6	6.2	1.70	6.7	5.54
N392	014	049	1974	5.1	5.7	2.09	6.7	5.54
N392	014	054	1974	13.0	14.0	0.00	13.0	7.46
N392	014	054	1974	12.5	13.5	0.70	13.0	7.46
N392	014	054	1974	11.9	13.0	1.40	13.0	7.46
N392	014	054	1974	11.2	12.0	1.60	13.0	7.46
N392	014	054	1974	9.0	10.0	2.35	13.0	7.46
N392	014	054	1974	8.3	9.0	3.39	13.0	7.46
N392	014	054	1974	6.3	7.0	3.90	13.0	7.46
N392	014	054	1974	5.5	6.0	4.43	13.0	7.46
N392	014	054	1974	4.5	5.0	5.40	13.0	7.46
N392	014	060	1974	7.9	8.7	0.70	7.8	5.43
N392	014	060	1974	7.0	7.8	1.40	7.8	5.43
N392	014	060	1974	6.6	7.3	1.50	7.8	5.43

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	014	060	1974	5.6	6.3	2.56	7.8	5.43
N392	014	060	1974	5.1	5.8	2.70	7.8	5.43
N392	014	060	1974	4.7	5.3	2.75	7.8	5.43
N392	021	010	1974	12.0	13.5	0.00	12.5	6.67
N392	021	010	1974	11.6	12.5	1.40	12.5	6.67
N392	021	010	1974	10.5	11.5	1.70	12.5	6.67
N392	021	010	1974	9.6	10.5	2.15	12.5	6.67
N392	021	010	1974	7.6	8.5	3.20	12.5	6.67
N392	021	010	1974	6.7	7.5	3.48	12.5	6.67
N392	021	010	1974	5.8	6.5	4.00	12.5	6.67
N392	021	010	1974	4.8	5.5	4.45	12.5	6.67
N392	021	014	1974	11.3	12.8	0.00	11.2	6.73
N392	021	014	1974	10.0	11.2	1.40	11.2	6.73
N392	021	014	1974	9.3	10.2	1.65	11.2	6.73
N392	021	014	1974	8.3	9.2	2.58	11.2	6.73
N392	021	014	1974	7.4	8.2	3.17	11.2	6.73
N392	021	014	1974	5.5	6.2	4.00	11.2	6.73
N392	021	014	1974	4.5	5.2	4.50	11.2	6.73
N392	021	016	1974	6.5	7.0	0.00	6.6	5.09
N392	021	016	1974	6.2	6.8	0.70	6.6	5.09
N392	021	016	1974	5.5	6.1	1.72	6.6	5.09
N392	021	016	1974	5.1	5.6	2.25	6.6	5.09
N392	021	016	1974	4.6	5.1	2.60	6.6	5.09
N392	021	018	1974	9.5	10.4	0.00	8.6	5.71
N392	021	018	1974	7.6	8.6	1.40	8.6	5.71
N392	021	018	1974	6.8	7.6	1.78	8.6	5.71
N392	021	018	1974	5.9	6.6	2.18	8.6	5.71
N392	021	018	1974	5.0	5.6	2.90	8.6	5.71
N392	021	019	1974	13.2	14.7	0.00	12.7	7.51
N392	021	019	1974	12.4	13.7	0.70	12.7	7.51
N392	021	019	1974	11.7	12.7	1.40	12.7	7.51
N392	021	019	1974	10.8	11.7	1.80	12.7	7.51
N392	021	019	1974	8.8	9.7	2.59	12.7	7.51
N392	021	019	1974	6.8	7.7	3.65	12.7	7.51
N392	021	019	1974	6.0	6.7	4.08	12.7	7.51
N392	021	019	1974	4.9	5.7	4.65	12.7	7.51
N392	021	020	1974	6.7	7.5	0.70	7.1	4.49
N392	021	020	1974	6.4	7.1	1.40	7.1	4.49
N392	021	020	1974	5.9	6.6	1.50	7.1	4.49
N392	021	020	1974	5.4	6.1	1.91	7.1	4.49
N392	021	020	1974	5.1	5.6	2.31	7.1	4.49
N392	021	020	1974	4.6	5.1	2.80	7.1	4.49
N392	022	001	1974	12.8	14.4	0.00	12.2	8.23
N392	022	001	1974	11.2	12.2	1.40	12.2	8.23
N392	022	001	1974	10.2	11.2	2.25	12.2	8.23
N392	022	001	1974	9.2	10.2	2.82	12.2	8.23
N392	022	001	1974	8.2	9.2	3.46	12.2	8.23
N392	022	001	1974	7.3	8.2	4.42	12.2	8.23
N392	022	001	1974	5.6	6.2	5.50	12.2	8.23
N392	022	001	1974	4.7	5.2	6.20	12.2	8.23

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	022	037	1974	8.1	8.5	0.00	7.5	5.74
N392	022	037	1974	7.6	8.0	0.70	7.5	5.74
N392	022	037	1974	7.1	7.5	1.40	7.5	5.74
N392	022	037	1974	5.1	5.5	3.02	7.5	5.74
N392	022	050	1974	9.9	10.5	0.00	9.1	6.82
N392	022	050	1974	8.5	9.1	1.40	9.1	6.82
N392	022	050	1974	7.6	8.1	1.99	9.1	6.82
N392	022	050	1974	6.5	7.1	2.78	9.1	6.82
N392	022	050	1974	5.6	6.1	3.45	9.1	6.82
N392	022	050	1974	4.6	5.1	4.41	9.1	6.82
N392	022	054	1974	8.5	9.2	0.70	8.6	6.71
N392	022	054	1974	8.0	8.6	1.40	8.6	6.71
N392	022	054	1974	7.0	7.6	1.97	8.6	6.71
N392	022	054	1974	6.0	6.6	2.86	8.6	6.71
N392	022	054	1974	5.0	5.6	3.64	8.6	6.71
N392	022	055	1974	14.6	15.5	0.00	12.5	7.82
N392	022	055	1974	13.2	14.0	0.70	12.5	7.82
N392	022	055	1974	11.7	12.5	1.40	12.5	7.82
N392	022	055	1974	8.7	9.5	3.79	12.5	7.82
N392	022	055	1974	7.7	8.5	4.01	12.5	7.82
N392	022	055	1974	6.9	7.5	4.40	12.5	7.82
N392	022	055	1974	5.9	6.5	5.25	12.5	7.82
N392	022	055	1974	4.9	5.5	5.83	12.5	7.82
N392	022	060	1974	19.4	21.2	0.00	14.2	7.79
N392	022	060	1974	16.3	17.7	0.70	14.2	7.79
N392	022	060	1974	13.3	14.2	1.40	14.2	7.79
N392	022	060	1974	12.3	13.2	2.09	14.2	7.79
N392	022	060	1974	11.4	12.2	2.50	14.2	7.79
N392	022	060	1974	10.3	11.2	2.94	14.2	7.79
N392	022	060	1974	9.4	10.2	3.21	14.2	7.79
N392	022	060	1974	8.4	9.2	3.65	14.2	7.79
N392	022	060	1974	7.5	8.2	4.06	14.2	7.79
N392	022	060	1974	6.5	7.2	4.64	14.2	7.79
N392	023	005	1974	7.1	8.0	0.00	6.8	4.75
N392	023	005	1974	6.7	7.4	0.70	6.8	4.75
N392	023	005	1974	5.7	6.3	2.03	6.8	4.75
N392	023	005	1974	5.2	5.8	2.20	6.8	4.75
N392	023	005	1974	4.7	5.3	2.34	6.8	4.75
N392	023	038	1974	9.8	10.8	0.00	9.4	6.37
N392	023	038	1974	8.8	9.4	1.40	9.4	6.37
N392	023	038	1974	7.8	8.4	1.76	9.4	6.37
N392	023	038	1974	6.8	7.4	2.41	9.4	6.37
N392	023	038	1974	5.8	6.4	2.99	9.4	6.37
N392	023	038	1974	4.9	5.4	3.68	9.4	6.37
N392	023	040	1974	16.1	17.3	0.00	14.1	7.09
N392	023	040	1974	14.5	15.7	0.70	14.1	7.09
N392	023	040	1974	12.1	13.1	1.54	14.1	7.09
N392	023	040	1974	11.0	12.1	1.92	14.1	7.09
N392	023	040	1974	10.2	11.1	2.38	14.1	7.09
N392	023	040	1974	9.3	10.1	2.95	14.1	7.09

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	023	040	1974	8.3	9.1	3.33	14.1	7.09
N392	023	040	1974	7.3	8.1	3.72	14.1	7.09
N392	023	040	1974	5.5	6.1	4.32	14.1	7.09
N392	023	040	1974	4.5	5.1	4.98	14.1	7.09
N392	023	046	1974	13.2	14.7	0.00	12.7	7.80
N392	023	046	1974	12.5	13.7	0.70	12.7	7.80
N392	023	046	1974	11.9	12.7	1.40	12.7	7.80
N392	023	046	1974	10.0	10.7	2.31	12.7	7.80
N392	023	046	1974	8.9	9.7	3.24	12.7	7.80
N392	023	046	1974	7.9	8.7	3.68	12.7	7.80
N392	023	046	1974	6.9	7.7	3.89	12.7	7.80
N392	023	046	1974	6.0	6.7	4.34	12.7	7.80
N392	023	054	1974	13.1	14.4	0.00	12.0	8.71
N392	023	054	1974	12.1	13.2	0.70	12.0	8.71
N392	023	054	1974	11.2	12.0	1.40	12.0	8.71
N392	023	054	1974	9.2	10.0	3.39	12.0	8.71
N392	023	054	1974	8.2	9.0	3.87	12.0	8.71
N392	023	054	1974	7.3	8.0	4.46	12.0	8.71
N392	023	054	1974	5.1	6.0	5.90	12.0	8.71
N392	023	054	1974	4.2	5.0	6.22	12.0	8.71
N392	023	058	1974	8.8	9.7	0.00	7.1	5.02
N392	023	058	1974	7.6	8.4	0.70	7.1	5.02
N392	023	058	1974	6.4	7.1	1.40	7.1	5.02
N392	023	058	1974	6.0	6.6	1.95	7.1	5.02
N392	023	058	1974	5.4	6.1	2.03	7.1	5.02
N392	023	058	1974	4.5	5.1	2.57	7.1	5.02
N392	024	003	1974	9.9	10.8	0.00	10.2	7.74
N392	024	003	1974	9.7	10.5	0.70	10.2	7.74
N392	024	003	1974	9.5	10.2	1.40	10.2	7.74
N392	024	003	1974	8.6	9.2	2.15	10.2	7.74
N392	024	003	1974	6.6	7.2	3.84	10.2	7.74
N392	024	003	1974	5.6	6.2	4.56	10.2	7.74
N392	024	008	1974	9.5	10.4	0.00	8.4	5.15
N392	024	008	1974	8.6	9.4	0.70	8.4	5.15
N392	024	008	1974	7.7	8.4	1.40	8.4	5.15
N392	024	008	1974	6.8	7.4	1.99	8.4	5.15
N392	024	008	1974	4.8	5.4	2.70	8.4	5.15
N392	024	009	1974	12.4	13.6	0.70	11.4	7.92
N392	024	009	1974	10.5	11.4	1.40	11.4	7.92
N392	024	009	1974	9.6	10.4	2.01	11.4	7.92
N392	024	009	1974	8.5	9.4	2.89	11.4	7.92
N392	024	009	1974	7.6	8.4	3.56	11.4	7.92
N392	024	009	1974	5.7	6.4	4.55	11.4	7.92
N392	024	009	1974	4.8	5.4	5.24	11.4	7.92
N392	024	010	1974	12.3	13.6	0.00	11.6	7.56
N392	024	010	1974	11.4	12.6	0.70	11.6	7.56
N392	024	010	1974	8.8	9.6	2.59	11.6	7.56
N392	024	010	1974	7.8	8.6	3.16	11.6	7.56
N392	024	010	1974	6.8	7.6	3.55	11.6	7.56
N392	024	010	1974	5.9	6.6	3.90	11.6	7.56

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	024	010	1974	5.0	5.6	4.44	11.6	7.56
N392	024	021	1974	11.3	12.7	0.00	9.3	5.30
N392	024	021	1974	10.0	11.0	0.70	9.3	5.30
N392	024	021	1974	8.6	9.3	1.40	9.3	5.30
N392	024	021	1974	7.9	8.3	1.48	9.3	5.30
N392	024	021	1974	6.9	7.3	2.01	9.3	5.30
N392	024	021	1974	5.8	6.3	2.59	9.3	5.30
N392	024	034	1974	8.6	9.8	0.00	8.2	5.31
N392	024	034	1974	7.4	8.2	1.40	8.2	5.31
N392	024	034	1974	6.5	7.2	1.92	8.2	5.31
N392	024	034	1974	5.6	6.2	2.46	8.2	5.31
N392	024	034	1974	4.6	5.2	2.94	8.2	5.31
N392	031	004	1974	8.7	9.4	0.00	8.2	5.98
N392	031	004	1974	8.1	8.8	0.70	8.2	5.98
N392	031	004	1974	7.6	8.2	1.40	8.2	5.98
N392	031	004	1974	6.6	7.2	1.50	8.2	5.98
N392	031	004	1974	5.6	6.2	2.34	8.2	5.98
N392	031	008	1974	16.1	18.4	0.00	13.4	6.98
N392	031	008	1974	14.3	15.9	0.70	13.4	6.98
N392	031	008	1974	11.4	12.4	1.81	13.4	6.98
N392	031	008	1974	10.4	11.4	2.32	13.4	6.98
N392	031	008	1974	9.5	10.4	2.83	13.4	6.98
N392	031	008	1974	8.5	9.4	3.20	13.4	6.98
N392	031	008	1974	7.6	8.4	3.38	13.4	6.98
N392	031	008	1974	6.6	7.4	3.40	13.4	6.98
N392	031	008	1974	4.7	5.4	4.64	13.4	6.98
N392	031	010	1974	16.5	18.1	0.00	14.1	6.91
N392	031	010	1974	14.8	16.1	0.70	14.1	6.91
N392	031	010	1974	13.2	14.1	1.40	14.1	6.91
N392	031	010	1974	12.2	13.1	1.81	14.1	6.91
N392	031	010	1974	10.3	11.1	2.38	14.1	6.91
N392	031	010	1974	9.1	10.1	3.12	14.1	6.91
N392	031	010	1974	7.4	8.1	3.77	14.1	6.91
N392	031	010	1974	6.4	7.1	4.35	14.1	6.91
N392	031	010	1974	5.5	6.1	4.60	14.1	6.91
N392	031	010	1974	4.5	5.1	4.63	14.1	6.91
N392	031	012	1974	16.1	17.6	0.00	13.6	7.84
N392	031	012	1974	12.4	13.6	1.40	13.6	7.84
N392	031	012	1974	11.4	12.6	2.13	13.6	7.84
N392	031	012	1974	10.6	11.6	2.41	13.6	7.84
N392	031	012	1974	9.8	10.6	3.02	13.6	7.84
N392	031	012	1974	7.6	8.6	4.54	13.6	7.84
N392	031	012	1974	6.9	7.6	4.90	13.6	7.84
N392	031	012	1974	6.0	6.6	5.80	13.6	7.84
N392	031	012	1974	5.0	5.6	6.35	13.6	7.84
N392	031	059	1974	9.4	11.0	0.00	8.0	5.67
N392	031	059	1974	8.4	9.5	0.70	8.0	5.67
N392	031	059	1974	6.4	7.0	2.01	8.0	5.67
N392	031	059	1974	5.4	6.0	2.66	8.0	5.67
N392	031	059	1974	4.5	5.0	3.32	8.0	5.67

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	031	060	1974	10.6	11.9	0.00	8.9	5.41
N392	031	060	1974	9.4	10.4	0.70	8.9	5.41
N392	031	060	1974	8.1	8.9	1.40	8.9	5.41
N392	031	060	1974	6.2	6.9	2.58	8.9	5.41
N392	031	060	1974	5.1	5.9	3.02	8.9	5.41
N392	032	007	1974	12.7	13.6	0.00	11.6	6.65
N392	032	007	1974	11.7	12.6	0.70	11.6	6.65
N392	032	007	1974	10.8	11.6	1.40	11.6	6.65
N392	032	007	1974	9.9	10.6	1.80	11.6	6.65
N392	032	007	1974	7.9	8.6	2.79	11.6	6.65
N392	032	007	1974	5.9	6.6	3.78	11.6	6.65
N392	032	007	1974	5.0	5.6	4.37	11.6	6.65
N392	032	009	1974	8.2	8.9	0.00	6.9	5.50
N392	032	009	1974	7.2	7.9	0.70	6.9	5.50
N392	032	009	1974	5.8	6.4	2.01	6.9	5.50
N392	032	009	1974	5.4	5.9	2.46	6.9	5.50
N392	032	009	1974	5.1	5.4	2.62	6.9	5.50
N392	032	017	1974	10.3	11.2	0.00	7.2	4.71
N392	032	017	1974	8.5	9.2	0.70	7.2	4.71
N392	032	017	1974	6.7	7.2	1.40	7.2	4.71
N392	032	017	1974	5.9	6.7	1.96	7.2	4.71
N392	032	017	1974	5.4	6.2	1.98	7.2	4.71
N392	032	017	1974	4.7	5.2	2.39	7.2	4.71
N392	032	019	1974	10.6	11.6	0.00	10.0	6.90
N392	032	019	1974	9.4	10.0	1.40	10.0	6.90
N392	032	019	1974	7.4	8.0	2.43	10.0	6.90
N392	032	019	1974	6.4	7.0	2.78	10.0	6.90
N392	032	019	1974	5.4	6.0	3.40	10.0	6.90
N392	032	019	1974	4.5	5.0	3.84	10.0	6.90
N392	032	023	1974	8.0	8.5	0.00	6.5	5.46
N392	032	023	1974	7.0	7.5	0.70	6.5	5.46
N392	032	023	1974	6.1	6.5	1.40	6.5	5.46
N392	032	023	1974	4.9	5.5	2.00	6.5	5.46
N392	032	023	1974	4.5	5.0	2.79	6.5	5.46
N392	032	025	1974	11.1	12.2	0.70	11.2	6.62
N392	032	025	1974	10.1	11.2	1.40	11.2	6.62
N392	032	025	1974	9.3	10.2	1.65	11.2	6.62
N392	032	025	1974	8.4	9.2	2.51	11.2	6.62
N392	032	025	1974	6.4	7.2	3.54	11.2	6.62
N392	032	025	1974	5.4	6.2	4.10	11.2	6.62
N392	032	025	1974	4.4	5.2	4.13	11.2	6.62
N392	033	001	1974	11.7	12.5	0.70	10.5	7.42
N392	033	001	1974	9.8	10.5	1.40	10.5	7.42
N392	033	001	1974	8.9	9.5	2.00	10.5	7.42
N392	033	001	1974	6.8	7.5	3.19	10.5	7.42
N392	033	001	1974	5.8	6.5	4.47	10.5	7.42
N392	033	001	1974	5.0	5.5	4.84	10.5	7.42
N392	033	002	1974	7.0	8.0	0.00	6.2	5.60
N392	033	002	1974	5.6	6.2	1.40	6.2	5.60
N392	033	002	1974	5.1	5.7	2.00	6.2	5.60

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	033	002	1974	4.7	5.2	2.39	6.2	5.60
N392	033	003	1974	6.8	7.5	0.70	6.7	5.71
N392	033	003	1974	6.0	6.7	1.40	6.7	5.71
N392	033	003	1974	5.5	6.2	1.76	6.7	5.71
N392	033	003	1974	5.2	5.7	2.35	6.7	5.71
N392	033	003	1974	4.7	5.2	2.69	6.7	5.71
N392	033	004	1974	7.7	8.4	0.00	6.4	4.96
N392	033	004	1974	6.7	7.4	0.70	6.4	4.96
N392	033	004	1974	5.7	6.4	1.40	6.4	4.96
N392	033	004	1974	4.9	5.4	2.41	6.4	4.96
N392	033	009	1974	12.0	13.0	0.00	9.0	6.02
N392	033	009	1974	10.2	11.0	0.70	9.0	6.02
N392	033	009	1974	8.4	9.0	1.40	9.0	6.02
N392	033	009	1974	7.4	8.0	2.03	9.0	6.02
N392	033	009	1974	6.2	7.0	2.61	9.0	6.02
N392	033	009	1974	5.3	6.0	3.21	9.0	6.02
N392	033	055	1974	13.7	15.5	0.00	12.5	7.68
N392	033	055	1974	12.6	14.0	0.70	12.5	7.68
N392	033	055	1974	10.6	11.5	1.70	12.5	7.68
N392	033	055	1974	9.9	10.5	1.85	12.5	7.68
N392	033	055	1974	8.8	9.5	2.57	12.5	7.68
N392	033	055	1974	7.8	8.5	3.25	12.5	7.68
N392	033	055	1974	5.9	6.5	4.46	12.5	7.68
N392	033	055	1974	4.9	5.5	4.85	12.5	7.68
N392	034	001	1974	9.8	10.5	0.70	10.0	7.20
N392	034	001	1974	9.3	10.0	1.40	10.0	7.20
N392	034	001	1974	8.3	9.0	1.92	10.0	7.20
N392	034	001	1974	6.2	7.0	3.38	10.0	7.20
N392	034	001	1974	5.3	6.0	4.15	10.0	7.20
N392	034	001	1974	4.4	5.0	4.51	10.0	7.20
N392	034	037	1974	9.7	10.5	0.00	8.5	6.13
N392	034	037	1974	7.9	8.5	1.40	8.5	6.13
N392	034	037	1974	6.9	7.5	2.11	8.5	6.13
N392	034	037	1974	5.9	6.5	2.59	8.5	6.13
N392	034	037	1974	4.9	5.5	2.85	8.5	6.13
N392	034	052	1974	11.6	12.6	0.70	10.1	6.51
N392	034	052	1974	8.4	9.1	2.32	10.1	6.51
N392	034	052	1974	7.4	8.1	2.95	10.1	6.51
N392	034	052	1974	6.5	7.1	3.20	10.1	6.51
N392	034	052	1974	5.4	6.1	3.61	10.1	6.51
N392	034	052	1974	4.4	5.1	4.31	10.1	6.51
N392	034	034	1974	9.7	10.9	0.00	7.5	5.70
N392	034	034	1974	6.9	7.5	1.40	7.5	5.70
N392	034	034	1974	6.4	7.0	1.72	7.5	5.70
N392	034	034	1974	5.4	6.0	2.45	7.5	5.70
N392	034	034	1974	4.9	5.5	2.61	7.5	5.70
N392	034	034	1974	4.4	5.0	2.89	7.5	5.70
N392	034	058	1974	11.0	12.0	0.00	11.6	5.82
N392	034	058	1974	10.8	11.8	0.70	11.6	5.82
N392	034	058	1974	10.7	11.6	1.40	11.6	5.82

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	034	058	1974	9.7	10.6	1.45	11.6	5.82
N392	034	058	1974	8.7	9.6	1.60	11.6	5.82
N392	034	058	1974	7.8	8.6	2.19	11.6	5.82
N392	034	058	1974	5.8	6.6	3.31	11.6	5.82
N392	011	001	1978	23.4	26.0	0.00	22.0	14.58
N392	011	001	1978	22.0	24.0	0.70	22.0	14.58
N392	011	001	1978	20.6	22.0	1.40	22.0	14.58
N392	011	001	1978	18.8	19.6	2.97	22.0	14.58
N392	011	001	1978	14.7	15.1	6.36	22.0	14.58
N392	011	001	1978	11.2	11.5	7.73	22.0	14.58
N392	011	001	1978	9.3	9.5	9.36	22.0	14.58
N392	011	001	1978	6.8	7.0	11.22	22.0	14.58
N392	011	007	1978	18.9	21.4	0.70	20.1	12.22
N392	011	007	1978	17.9	20.1	1.40	20.1	12.22
N392	011	007	1978	16.0	17.2	2.71	20.1	12.22
N392	011	007	1978	14.4	15.2	3.43	20.1	12.22
N392	011	007	1978	9.9	10.3	6.45	20.1	12.22
N392	011	007	1978	7.3	7.5	8.26	20.1	12.22
N392	011	007	1978	4.8	5.0	9.88	20.1	12.22
N392	011	035	1978	22.9	25.3	0.00	19.7	13.62
N392	011	035	1978	18.1	19.7	1.40	19.7	13.62
N392	011	035	1978	16.4	17.5	2.73	19.7	13.62
N392	011	035	1978	14.6	15.1	4.39	19.7	13.62
N392	011	035	1978	9.7	10.1	7.77	19.7	13.62
N392	011	035	1978	7.2	7.6	9.30	19.7	13.62
N392	011	035	1978	5.0	5.2	11.21	19.7	13.62
N392	011	042	1978	13.9	16.3	0.00	13.9	11.16
N392	011	042	1978	13.1	15.1	0.70	13.9	11.16
N392	011	042	1978	12.3	13.9	1.40	13.9	11.16
N392	011	042	1978	11.7	13.1	2.46	13.9	11.16
N392	011	042	1978	11.1	11.9	3.04	13.9	11.16
N392	011	042	1978	10.7	11.1	3.97	13.9	11.16
N392	011	042	1978	9.5	9.9	4.93	13.9	11.16
N392	011	042	1978	8.8	9.0	5.60	13.9	11.16
N392	011	042	1978	6.5	6.7	7.63	13.9	11.16
N392	011	042	1978	4.7	4.9	8.82	13.9	11.16
N392	011	051	1978	14.2	15.9	0.00	13.7	13.11
N392	011	051	1978	13.3	14.8	0.70	13.7	13.11
N392	011	051	1978	12.5	13.7	1.40	13.7	13.11
N392	011	051	1978	12.2	12.8	2.34	13.7	13.11
N392	011	051	1978	10.7	11.1	2.92	13.7	13.11
N392	011	051	1978	10.1	10.5	3.78	13.7	13.11
N392	011	051	1978	9.5	9.9	4.88	13.7	13.11
N392	011	051	1978	8.6	8.8	6.16	13.7	13.11
N392	011	051	1978	6.4	6.6	8.56	13.7	13.11
N392	012	015	1978	12.9	14.5	0.00	13.3	12.70
N392	012	015	1978	12.9	13.9	0.70	13.3	12.70
N392	012	015	1978	12.9	13.3	1.40	13.3	12.70
N392	012	015	1978	12.0	12.4	2.29	13.3	12.70
N392	012	015	1978	10.9	11.1	3.94	13.3	12.70

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	012	015	1978	9.8	10.0	5.00	13.3	12.70
N392	012	015	1978	7.8	8.0	7.21	13.3	12.70
N392	012	015	1978	7.1	7.3	8.04	13.3	12.70
N392	012	015	1978	4.9	5.1	10.18	13.3	12.70
N392	012	029	1978	23.1	25.5	0.70	22.8	14.48
N392	012	029	1978	21.0	22.8	1.40	22.8	14.48
N392	012	029	1978	19.1	20.3	2.44	22.8	14.48
N392	012	029	1978	17.0	17.4	3.86	22.8	14.48
N392	012	029	1978	12.6	12.8	6.92	22.8	14.48
N392	012	029	1978	10.0	10.2	8.69	22.8	14.48
N392	012	029	1978	7.9	8.1	9.90	22.8	14.48
N392	012	029	1978	5.2	5.4	12.11	22.8	14.48
N392	012	041	1978	21.0	23.9	0.00	20.7	14.02
N392	012	041	1978	20.1	22.3	0.70	20.7	14.02
N392	012	041	1978	19.2	20.7	1.40	20.7	14.02
N392	012	041	1978	17.4	18.5	2.91	20.7	14.02
N392	012	041	1978	15.7	16.2	4.43	20.7	14.02
N392	012	041	1978	13.2	13.6	6.14	20.7	14.02
N392	012	041	1978	6.0	6.2	10.61	20.7	14.02
N392	012	043	1978	16.8	18.8	0.00	16.2	11.21
N392	012	043	1978	15.0	16.2	1.40	16.2	11.21
N392	012	043	1978	13.5	14.1	3.33	16.2	11.21
N392	012	043	1978	10.9	11.3	5.44	16.2	11.21
N392	012	043	1978	8.6	8.8	7.09	16.2	11.21
N392	012	043	1978	5.8	6.0	9.14	16.2	11.21
N392	012	051	1978	21.2	23.4	0.00	20.0	12.69
N392	012	051	1978	19.7	21.7	0.70	20.0	12.69
N392	012	051	1978	16.2	17.4	2.76	20.0	12.69
N392	012	051	1978	14.5	15.3	3.74	20.0	12.69
N392	012	051	1978	11.8	12.2	5.19	20.0	12.69
N392	012	051	1978	7.2	7.6	8.00	20.0	12.69
N392	012	051	1978	4.8	5.0	10.49	20.0	12.69
N392	013	003	1978	21.3	23.0	0.00	19.4	14.48
N392	013	003	1978	17.8	19.4	1.40	19.4	14.48
N392	013	003	1978	16.6	17.5	3.47	19.4	14.48
N392	013	003	1978	12.1	12.5	6.71	19.4	14.48
N392	013	003	1978	9.6	9.8	8.87	19.4	14.48
N392	013	003	1978	6.7	6.9	10.86	19.4	14.48
N392	013	003	1978	4.6	4.8	12.19	19.4	14.48
N392	013	012	1978	19.2	21.7	0.70	19.4	13.62
N392	013	012	1978	17.8	19.4	1.40	19.4	13.62
N392	013	012	1978	13.5	13.9	4.74	19.4	13.62
N392	013	012	1978	11.7	12.1	6.37	19.4	13.62
N392	013	012	1978	9.3	9.5	7.18	19.4	13.62
N392	013	012	1978	6.7	6.9	9.36	19.4	13.62
N392	013	012	1978	4.6	4.8	11.20	19.4	13.62
N392	013	026	1978	14.9	16.7	0.00	14.1	12.06
N392	013	026	1978	14.0	15.4	0.70	14.1	12.06
N392	013	026	1978	13.1	14.1	1.40	14.1	12.06
N392	013	026	1978	12.3	12.9	2.40	14.1	12.06

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	013	026	1978	11.8	12.2	3.49	14.1	12.06
N392	013	026	1978	10.5	10.9	5.14	14.1	12.06
N392	013	026	1978	8.8	9.0	6.83	14.1	12.06
N392	013	026	1978	7.9	8.1	7.75	14.1	12.06
N392	013	026	1978	7.0	7.2	8.62	14.1	12.06
N392	013	026	1978	4.8	5.0	10.14	14.1	12.06
N392	013	027	1978	15.9	17.5	0.00	13.7	13.29
N392	013	027	1978	14.4	15.6	0.70	13.7	13.29
N392	013	027	1978	12.9	13.7	1.40	13.7	13.29
N392	013	027	1978	12.4	12.8	2.71	13.7	13.29
N392	013	027	1978	11.5	11.7	3.44	13.7	13.29
N392	013	027	1978	9.6	9.8	6.23	13.7	13.29
N392	013	027	1978	8.7	8.9	7.09	13.7	13.29
N392	013	027	1978	7.8	8.0	7.57	13.7	13.29
N392	013	027	1978	5.2	5.4	10.28	13.7	13.29
N392	013	036	1978	18.0	20.0	0.00	19.0	14.98
N392	013	036	1978	18.0	19.5	0.70	19.0	14.98
N392	013	036	1978	18.1	19.0	1.40	19.0	14.98
N392	013	036	1978	13.5	13.9	5.55	19.0	14.98
N392	013	036	1978	10.1	10.5	6.55	19.0	14.98
N392	013	036	1978	6.3	6.5	10.99	19.0	14.98
N392	014	008	1978	14.1	15.7	0.00	13.5	13.17
N392	014	008	1978	13.4	14.6	0.70	13.5	13.17
N392	014	008	1978	12.7	13.5	1.40	13.5	13.17
N392	014	008	1978	12.1	12.5	2.31	13.5	13.17
N392	014	008	1978	10.4	10.6	4.51	13.5	13.17
N392	014	008	1978	9.2	9.4	5.94	13.5	13.17
N392	014	008	1978	7.5	7.7	7.86	13.5	13.17
N392	014	008	1978	6.3	6.5	9.03	13.5	13.17
N392	014	008	1978	5.0	5.2	9.92	13.5	13.17
N392	014	019	1978	15.2	16.4	0.70	15.8	12.13
N392	014	019	1978	14.6	15.8	1.40	15.8	12.13
N392	014	019	1978	13.1	13.5	3.68	15.8	12.13
N392	014	019	1978	10.7	11.1	5.51	15.8	12.13
N392	014	019	1978	7.9	8.3	6.81	15.8	12.13
N392	014	019	1978	5.5	5.7	8.79	15.8	12.13
N392	014	035	1978	19.3	21.2	0.00	19.8	15.27
N392	014	035	1978	18.9	20.5	0.70	19.8	15.27
N392	014	035	1978	16.6	17.4	3.65	19.8	15.27
N392	014	035	1978	11.9	12.3	7.62	19.8	15.27
N392	014	035	1978	9.4	9.6	9.89	19.8	15.27
N392	014	035	1978	7.2	7.4	11.41	19.8	15.27
N392	014	035	1978	4.8	5.0	13.22	19.8	15.27
N392	014	046	1978	24.3	26.4	0.00	22.6	13.79
N392	014	046	1978	22.7	24.5	0.70	22.6	13.79
N392	014	046	1978	21.0	22.6	1.40	22.6	13.79
N392	014	046	1978	16.7	17.5	4.23	22.6	13.79
N392	014	046	1978	14.6	15.1	5.59	22.6	13.79
N392	014	046	1978	12.2	12.6	7.03	22.6	13.79
N392	014	046	1978	10.0	10.4	8.50	22.6	13.79

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	014	046	1978	5.0	5.2	11.82	22.6	13.79
N392	014	048	1978	23.1	25.5	0.70	22.1	14.95
N392	014	048	1978	19.8	22.1	1.40	22.1	14.95
N392	014	048	1978	18.1	19.7	3.04	22.1	14.95
N392	014	048	1978	16.0	16.8	4.36	22.1	14.95
N392	014	048	1978	14.1	14.5	5.89	22.1	14.95
N392	014	048	1978	11.7	12.1	7.13	22.1	14.95
N392	014	048	1978	9.3	9.7	9.22	22.1	14.95
N392	014	048	1978	4.5	4.7	12.92	22.1	14.95
N392	021	014	1978	23.3	26.1	0.70	24.1	13.91
N392	021	014	1978	22.1	24.1	1.40	24.1	13.91
N392	021	014	1978	19.9	21.5	2.85	24.1	13.91
N392	021	014	1978	17.8	19.0	3.91	24.1	13.91
N392	021	014	1978	13.2	13.9	6.46	24.1	13.91
N392	021	014	1978	11.1	11.5	8.15	24.1	13.91
N392	021	014	1978	8.4	8.8	9.49	24.1	13.91
N392	021	014	1978	6.3	6.5	10.78	24.1	13.91
N392	021	027	1978	22.5	24.2	0.00	22.8	13.04
N392	021	027	1978	21.3	22.8	1.40	22.8	13.04
N392	021	027	1978	19.7	20.7	2.12	22.8	13.04
N392	021	027	1978	16.9	17.5	3.54	22.8	13.04
N392	021	027	1978	14.6	15.0	5.14	22.8	13.04
N392	021	027	1978	12.9	13.3	6.37	22.8	13.04
N392	021	027	1978	7.6	8.0	9.14	22.8	13.04
N392	021	027	1978	5.2	5.4	10.14	22.8	13.04
N392	021	034	1978	24.4	26.1	0.00	22.5	14.53
N392	021	034	1978	22.7	24.3	0.70	22.5	14.53
N392	021	034	1978	19.7	20.9	1.92	22.5	14.53
N392	021	034	1978	17.4	18.0	3.46	22.5	14.53
N392	021	034	1978	14.6	15.0	5.47	22.5	14.53
N392	021	034	1978	12.0	12.4	6.99	22.5	14.53
N392	021	034	1978	9.7	10.1	8.18	22.5	14.53
N392	021	034	1978	4.7	4.9	11.94	22.5	14.53
N392	021	053	1978	14.3	15.9	0.00	13.3	14.33
N392	021	053	1978	13.4	14.6	0.70	13.3	14.33
N392	021	053	1978	12.5	13.3	1.40	13.3	14.33
N392	021	053	1978	9.8	10.0	5.89	13.3	14.33
N392	021	053	1978	8.7	8.9	6.93	13.3	14.33
N392	021	053	1978	7.8	8.0	7.88	13.3	14.33
N392	021	053	1978	6.8	7.0	9.19	13.3	14.33
N392	021	053	1978	5.8	6.0	10.15	13.3	14.33
N392	021	053	1978	4.9	5.1	11.19	13.3	14.33
N392	021	060	1978	14.3	15.9	0.70	14.6	11.64
N392	021	060	1978	13.8	14.6	1.40	14.6	11.64
N392	021	060	1978	13.5	13.9	2.20	14.6	11.64
N392	021	060	1978	11.3	11.7	4.18	14.6	11.64
N392	021	060	1978	10.3	10.6	5.04	14.6	11.64
N392	021	060	1978	9.5	9.7	5.92	14.6	11.64
N392	021	060	1978	8.4	8.6	6.94	14.6	11.64
N392	021	060	1978	7.5	7.7	7.77	14.6	11.64

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	021	060	1978	6.6	6.8	8.58	14.6	11.64
N392	021	060	1978	5.5	5.7	9.21	14.6	11.64
N392	022	007	1978	22.7	25.2	0.00	21.8	16.98
N392	022	007	1978	21.5	23.5	0.70	21.8	16.98
N392	022	007	1978	20.3	21.8	1.40	21.8	16.98
N392	022	007	1978	16.1	16.7	4.42	21.8	16.98
N392	022	007	1978	11.1	11.5	9.07	21.8	16.98
N392	022	007	1978	9.3	9.7	10.78	21.8	16.98
N392	022	007	1978	6.6	6.8	12.98	21.8	16.98
N392	022	015	1978	12.6	14.1	0.00	12.1	12.56
N392	022	015	1978	11.9	13.1	0.70	12.1	12.56
N392	022	015	1978	11.3	12.1	1.40	12.1	12.56
N392	022	015	1978	11.0	11.4	2.76	12.1	12.56
N392	022	015	1978	9.9	10.1	3.69	12.1	12.56
N392	022	015	1978	9.0	9.2	5.92	12.1	12.56
N392	022	015	1978	8.0	8.2	6.93	12.1	12.56
N392	022	015	1978	5.9	6.1	9.03	12.1	12.56
N392	022	020	1978	14.4	15.6	0.00	15.0	14.07
N392	022	020	1978	14.1	15.3	0.70	15.0	14.07
N392	022	020	1978	13.8	15.0	1.40	15.0	14.07
N392	022	020	1978	12.5	12.7	3.14	15.0	14.07
N392	022	020	1978	7.6	7.8	9.10	15.0	14.07
N392	022	020	1978	5.0	5.2	11.66	15.0	14.07
N392	022	045	1978	20.0	23.0	0.00	21.8	17.02
N392	022	045	1978	19.9	22.4	0.70	21.8	17.02
N392	022	045	1978	19.8	21.8	1.40	21.8	17.02
N392	022	045	1978	18.0	19.2	2.51	21.8	17.02
N392	022	045	1978	16.1	16.9	4.57	21.8	17.02
N392	022	045	1978	13.9	14.5	6.38	21.8	17.02
N392	022	045	1978	11.6	12.0	8.74	21.8	17.02
N392	022	052	1978	24.6	28.0	0.00	22.2	14.26
N392	022	052	1978	22.7	25.1	0.70	22.2	14.26
N392	022	052	1978	20.8	22.2	1.40	22.2	14.26
N392	022	052	1978	19.1	19.9	3.18	22.2	14.26
N392	022	052	1978	16.7	17.3	4.69	22.2	14.26
N392	022	052	1978	14.2	14.6	6.37	22.2	14.26
N392	022	052	1978	9.4	9.6	9.81	22.2	14.26
N392	022	052	1978	5.0	5.2	13.37	22.2	14.26
N392	023	010	1978	24.1	26.4	0.00	24.2	15.56
N392	023	010	1978	22.5	24.2	1.40	24.2	15.56
N392	023	010	1978	18.6	19.4	3.79	24.2	15.56
N392	023	010	1978	16.1	16.5	5.19	24.2	15.56
N392	023	010	1978	13.8	14.2	7.06	24.2	15.56
N392	023	010	1978	11.5	11.7	8.64	24.2	15.56
N392	023	010	1978	9.0	9.2	10.61	24.2	15.56
N392	023	010	1978	6.3	6.5	12.59	24.2	15.56
N392	023	013	1978	16.2	18.2	0.70	16.4	14.58
N392	023	013	1978	15.2	16.4	1.40	16.4	14.58
N392	023	013	1978	13.2	13.7	3.41	16.4	14.58
N392	023	013	1978	10.7	11.1	5.89	16.4	14.58

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	023	013	1978	8.4	8.8	7.78	16.4	14.58
N392	023	013	1978	6.3	6.5	10.05	16.4	14.58
N392	023	023	1978	25.7	28.1	0.70	26.0	16.02
N392	023	023	1978	24.4	26.0	1.40	26.0	16.02
N392	023	023	1978	20.4	21.4	2.94	26.0	16.02
N392	023	023	1978	15.4	16.2	6.17	26.0	16.02
N392	023	023	1978	11.0	11.4	9.68	26.0	16.02
N392	023	023	1978	5.9	6.1	12.59	26.0	16.02
N392	023	032	1978	26.4	28.7	0.00	24.9	15.14
N392	023	032	1978	23.2	24.9	1.40	24.9	15.14
N392	023	032	1978	19.7	20.5	2.79	24.9	15.14
N392	023	032	1978	15.6	16.0	5.49	24.9	15.14
N392	023	032	1978	10.8	11.0	8.20	24.9	15.14
N392	023	032	1978	5.1	5.3	12.31	24.9	15.14
N392	023	058	1978	15.5	17.1	0.00	14.1	11.54
N392	023	058	1978	14.4	15.6	0.70	14.1	11.54
N392	023	058	1978	13.3	14.1	1.40	14.1	11.54
N392	023	058	1978	12.5	12.9	2.21	14.1	11.54
N392	023	058	1978	10.8	11.2	3.89	14.1	11.54
N392	023	058	1978	9.8	10.0	4.81	14.1	11.54
N392	023	058	1978	9.0	9.2	5.49	14.1	11.54
N392	023	058	1978	7.7	7.9	6.79	14.1	11.54
N392	023	058	1978	6.1	6.3	8.26	14.1	11.54
N392	023	058	1978	5.0	5.2	8.86	14.1	11.54
N392	024	009	1978	21.1	23.9	0.00	20.1	14.77
N392	024	009	1978	19.8	22.0	0.70	20.1	14.77
N392	024	009	1978	18.5	20.1	1.40	20.1	14.77
N392	024	009	1978	16.4	17.5	3.09	20.1	14.77
N392	024	009	1978	14.6	15.4	4.51	20.1	14.77
N392	024	009	1978	12.2	12.6	7.12	20.1	14.77
N392	024	009	1978	10.2	10.4	8.48	20.1	14.77
N392	024	019	1978	21.8	24.5	0.00	21.1	13.62
N392	024	019	1978	20.6	22.8	0.70	21.1	13.62
N392	024	019	1978	15.3	16.1	3.45	21.1	13.62
N392	024	019	1978	13.5	13.9	5.03	21.1	13.62
N392	024	019	1978	11.0	11.2	6.95	21.1	13.62
N392	024	019	1978	8.5	8.7	8.97	21.1	13.62
N392	024	019	1978	6.1	6.3	11.41	21.1	13.62
N392	024	026	1978	12.9	15.3	0.00	12.9	11.42
N392	024	026	1978	12.1	14.1	0.70	12.9	11.42
N392	024	026	1978	10.7	11.7	2.16	12.9	11.42
N392	024	026	1978	10.2	11.0	2.98	12.9	11.42
N392	024	026	1978	9.4	9.8	3.73	12.9	11.42
N392	024	026	1978	8.6	8.8	4.72	12.9	11.42
N392	024	026	1978	6.6	6.8	6.89	12.9	11.42
N392	024	026	1978	5.3	5.5	8.39	12.9	11.42
N392	024	035	1978	20.7	23.3	0.00	20.7	15.09
N392	024	035	1978	20.1	22.0	0.70	20.7	15.09
N392	024	035	1978	19.5	20.7	1.40	20.7	15.09
N392	024	035	1978	14.9	15.5	4.89	20.7	15.09

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	024	035	1978	10.3	10.7	8.94	20.7	15.09
N392	024	035	1978	8.0	8.2	10.74	20.7	15.09
N392	024	035	1978	5.6	5.8	12.19	20.7	15.09
N392	024	052	1978	11.9	12.7	0.70	12.4	12.28
N392	024	052	1978	11.8	12.4	1.40	12.4	12.28
N392	024	052	1978	10.8	11.2	2.55	12.4	12.28
N392	024	052	1978	10.0	10.4	3.81	12.4	12.28
N392	024	052	1978	8.2	8.4	5.99	12.4	12.28
N392	024	052	1978	7.3	7.5	7.16	12.4	12.28
N392	024	052	1978	6.2	6.4	8.12	12.4	12.28
N392	024	052	1978	5.1	5.3	9.38	12.4	12.28
N392	031	015	1978	21.2	24.3	0.70	21.7	13.18
N392	031	015	1978	19.7	21.7	1.40	21.7	13.18
N392	031	015	1978	18.7	20.1	2.95	21.7	13.18
N392	031	015	1978	16.2	17.0	3.42	21.7	13.18
N392	031	015	1978	13.5	14.1	5.29	21.7	13.18
N392	031	015	1978	8.4	8.8	7.88	21.7	13.18
N392	031	015	1978	6.4	6.8	9.80	21.7	13.18
N392	031	016	1978	22.5	25.3	0.00	21.9	15.02
N392	031	016	1978	21.4	23.6	0.70	21.9	15.02
N392	031	016	1978	20.3	21.9	1.40	21.9	15.02
N392	031	016	1978	18.4	19.3	2.57	21.9	15.02
N392	031	016	1978	16.1	16.5	4.81	21.9	15.02
N392	031	016	1978	14.1	14.5	6.50	21.9	15.02
N392	031	016	1978	10.3	10.5	7.16	21.9	15.02
N392	031	033	1978	14.2	16.2	0.00	13.6	11.54
N392	031	033	1978	13.3	14.9	0.70	13.6	11.54
N392	031	033	1978	12.4	13.6	1.40	13.6	11.54
N392	031	033	1978	12.2	12.6	2.39	13.6	11.54
N392	031	033	1978	10.1	10.5	4.74	13.6	11.54
N392	031	033	1978	9.2	9.6	5.58	13.6	11.54
N392	031	033	1978	8.2	8.4	6.80	13.6	11.54
N392	031	033	1978	6.2	6.4	8.91	13.6	11.54
N392	031	033	1978	5.3	5.5	9.73	13.6	11.54
N392	031	040	1978	17.0	18.5	0.00	15.9	13.06
N392	031	040	1978	16.0	17.2	0.70	15.9	13.06
N392	031	040	1978	15.1	15.9	1.40	15.9	13.06
N392	031	040	1978	13.2	13.6	3.20	15.9	13.06
N392	031	040	1978	10.7	11.1	5.14	15.9	13.06
N392	031	040	1978	8.2	8.6	7.67	15.9	13.06
N392	031	041	1978	20.4	22.2	0.00	21.0	14.61
N392	031	041	1978	19.8	21.0	1.40	21.0	14.61
N392	031	041	1978	15.8	16.4	4.44	21.0	14.61
N392	031	041	1978	13.0	13.4	6.29	21.0	14.61
N392	031	041	1978	10.8	11.2	8.07	21.0	14.61
N392	031	041	1978	8.6	8.8	9.79	21.0	14.61
N392	031	041	1978	6.0	6.2	12.26	21.0	14.61
N392	032	010	1978	20.0	23.2	0.00	20.0	13.58
N392	032	010	1978	18.4	20.0	1.40	20.0	13.58
N392	032	010	1978	16.0	17.1	2.88	20.0	13.58

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	032	010	1978	14.6	15.0	4.33	20.0	13.58
N392	032	010	1978	9.5	9.9	7.44	20.0	13.58
N392	032	010	1978	7.5	7.7	9.16	20.0	13.58
N392	032	010	1978	4.8	5.0	10.60	20.0	13.58
N392	032	023	1978	13.5	15.8	0.00	13.8	13.16
N392	032	023	1978	13.2	13.8	1.40	13.8	13.16
N392	032	023	1978	11.8	12.2	2.54	13.8	13.16
N392	032	023	1978	10.2	10.6	4.25	13.8	13.16
N392	032	023	1978	9.6	9.8	5.54	13.8	13.16
N392	032	023	1978	8.8	9.0	6.38	13.8	13.16
N392	032	023	1978	7.7	7.9	6.84	13.8	13.16
N392	032	023	1978	6.6	6.8	8.00	13.8	13.16
N392	032	023	1978	5.8	6.0	8.99	13.8	13.16
N392	032	023	1978	4.7	4.9	10.23	13.8	13.16
N392	032	044	1978	19.5	21.8	0.70	20.2	12.26
N392	032	044	1978	18.6	20.2	1.40	20.2	12.26
N392	032	044	1978	14.2	14.8	3.76	20.2	12.26
N392	032	044	1978	12.0	12.6	5.16	20.2	12.26
N392	032	044	1978	9.1	9.5	6.68	20.2	12.26
N392	032	044	1978	7.3	7.7	7.98	20.2	12.26
N392	032	044	1978	5.1	5.3	10.05	20.2	12.26
N392	032	057	1978	24.6	27.5	0.00	20.1	15.08
N392	032	057	1978	21.7	23.8	0.70	20.1	15.08
N392	032	057	1978	18.7	20.1	1.40	20.1	15.08
N392	032	057	1978	14.3	14.9	4.84	20.1	15.08
N392	032	057	1978	9.7	10.1	8.34	20.1	15.08
N392	032	057	1978	7.3	7.5	10.40	20.1	15.08
N392	032	057	1978	5.0	5.2	12.18	20.1	15.08
N392	032	060	1978	14.1	16.1	0.00	14.5	14.48
N392	032	060	1978	13.3	14.5	1.40	14.5	14.48
N392	032	060	1978	13.0	13.5	1.90	14.5	14.48
N392	032	060	1978	12.1	12.5	2.41	14.5	14.48
N392	032	060	1978	11.1	11.5	3.99	14.5	14.48
N392	032	060	1978	10.3	10.6	4.91	14.5	14.48
N392	032	060	1978	9.0	9.2	6.59	14.5	14.48
N392	032	060	1978	8.1	8.3	7.82	14.5	14.48
N392	032	060	1978	5.4	5.6	10.36	14.5	14.48
N392	033	002	1978	12.1	12.7	0.00	11.3	12.22
N392	033	002	1978	11.6	12.0	0.70	11.3	12.22
N392	033	002	1978	11.1	11.3	1.40	11.3	12.22
N392	033	002	1978	9.2	9.4	4.00	11.3	12.22
N392	033	002	1978	7.0	7.2	7.21	11.3	12.22
N392	033	002	1978	5.9	6.1	8.54	11.3	12.22
N392	033	002	1978	5.1	5.3	9.11	11.3	12.22
N392	033	007	1978	17.0	19.0	0.00	17.4	13.26
N392	033	007	1978	16.6	18.2	0.70	17.4	13.26
N392	033	007	1978	14.1	14.9	2.29	17.4	13.26
N392	033	007	1978	9.2	9.6	6.41	17.4	13.26
N392	033	007	1978	7.2	7.4	8.26	17.4	13.26
N392	033	007	1978	4.6	4.8	10.46	17.4	13.26

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	033	024	1978	16.4	18.0	0.70	17.0	13.46
N392	033	024	1978	15.8	17.0	1.40	17.0	13.46
N392	033	024	1978	11.9	12.3	5.24	17.0	13.46
N392	033	024	1978	9.5	9.9	7.21	17.0	13.46
N392	033	024	1978	7.0	7.2	9.04	17.0	13.46
N392	033	024	1978	4.7	4.9	10.78	17.0	13.46
N392	033	038	1978	19.2	21.0	0.00	18.8	14.56
N392	033	038	1978	18.3	19.9	0.70	18.8	14.56
N392	033	038	1978	15.4	16.1	3.46	18.8	14.56
N392	033	038	1978	10.6	11.0	7.46	18.8	14.56
N392	033	038	1978	8.7	8.9	9.19	18.8	14.56
N392	033	038	1978	6.3	6.5	10.96	18.8	14.56
N392	033	057	1978	13.0	14.0	0.00	11.4	11.09
N392	033	057	1978	11.9	12.7	0.70	11.4	11.09
N392	033	057	1978	10.8	11.4	1.40	11.4	11.09
N392	033	057	1978	10.8	11.4	1.73	11.4	11.09
N392	033	057	1978	9.9	10.3	2.65	11.4	11.09
N392	033	057	1978	9.4	9.6	3.48	11.4	11.09
N392	033	057	1978	8.3	8.5	4.62	11.4	11.09
N392	033	057	1978	7.3	7.5	5.34	11.4	11.09
N392	034	012	1978	25.0	27.4	0.00	22.4	14.49
N392	034	012	1978	20.8	22.4	1.40	22.4	14.49
N392	034	012	1978	18.7	19.7	3.10	22.4	14.49
N392	034	012	1978	16.8	17.6	4.34	22.4	14.49
N392	034	012	1978	14.2	14.6	5.98	22.4	14.49
N392	034	012	1978	11.5	11.9	7.45	22.4	14.49
N392	034	012	1978	9.7	9.9	8.71	22.4	14.49
N392	034	012	1978	4.8	5.0	11.70	22.4	14.49
N392	034	035	1978	24.3	27.1	0.00	24.1	15.03
N392	034	035	1978	23.2	25.6	0.70	24.1	15.03
N392	034	035	1978	19.9	21.5	2.75	24.1	15.03
N392	034	035	1978	18.4	19.5	3.66	24.1	15.03
N392	034	035	1978	15.5	16.2	5.84	24.1	15.03
N392	034	035	1978	13.0	13.4	6.88	24.1	15.03
N392	034	035	1978	11.4	11.8	7.63	24.1	15.03
N392	034	035	1978	8.9	9.1	9.56	24.1	15.03
N392	034	045	1978	14.8	16.8	0.00	15.0	13.26
N392	034	045	1978	14.3	15.9	0.70	15.0	13.26
N392	034	045	1978	13.8	15.0	1.40	15.0	13.26
N392	034	045	1978	12.1	12.7	2.98	15.0	13.26
N392	034	045	1978	9.8	10.2	5.35	15.0	13.26
N392	034	045	1978	5.0	5.2	9.92	15.0	13.26
N392	034	051	1978	22.7	24.3	1.40	24.3	15.16
N392	034	051	1978	20.6	21.4	2.78	24.3	15.16
N392	034	051	1978	18.4	19.1	3.77	24.3	15.16
N392	034	051	1978	16.3	16.9	5.28	24.3	15.16
N392	034	051	1978	13.2	13.6	6.74	24.3	15.16
N392	034	051	1978	10.0	10.4	7.99	24.3	15.16
N392	034	051	1978	8.6	8.8	9.38	24.3	15.16
N392	034	051	1978	6.3	6.5	11.22	24.3	15.16

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	034	055	1978	16.1	17.2	0.00	15.8	11.67
N392	034	055	1978	15.6	16.5	0.70	15.8	11.67
N392	034	055	1978	15.0	15.8	1.40	15.8	11.67
N392	034	055	1978	12.9	13.3	2.57	15.8	11.67
N392	034	055	1978	10.3	10.5	4.01	15.8	11.67
N392	034	055	1978	5.6	5.8	8.94	15.8	11.67
N392	011	002	1982	32.8	37.7	0.00	32.5	19.20
N392	011	002	1982	28.6	32.5	1.40	32.5	19.20
N392	011	002	1982	25.0	27.5	3.70	32.5	19.20
N392	011	002	1982	21.8	22.9	7.15	32.5	19.20
N392	011	002	1982	16.4	17.0	10.85	32.5	19.20
N392	011	002	1982	12.0	12.3	14.10	32.5	19.20
N392	011	016	1982	20.0	23.8	0.00	20.8	16.20
N392	011	016	1982	17.5	18.3	3.32	20.8	16.20
N392	011	016	1982	15.4	15.8	7.00	20.8	16.20
N392	011	016	1982	13.0	13.4	9.67	20.8	16.20
N392	011	016	1982	10.0	10.3	12.12	20.8	16.20
N392	011	016	1982	7.3	7.5	14.20	20.8	16.20
N392	011	021	1982	19.2	23.3	0.00	19.9	15.20
N392	011	021	1982	16.2	17.0	3.88	19.9	15.20
N392	011	021	1982	14.4	14.6	6.18	19.9	15.20
N392	011	021	1982	12.3	12.5	8.45	19.9	15.20
N392	011	021	1982	9.4	9.6	11.31	19.9	15.20
N392	011	021	1982	6.7	6.9	12.24	19.9	15.20
N392	011	022	1982	19.8	22.6	0.70	20.5	15.92
N392	011	022	1982	18.5	20.5	1.40	20.5	15.92
N392	011	022	1982	17.0	18.1	3.50	20.5	15.92
N392	011	022	1982	15.3	15.7	6.82	20.5	15.92
N392	011	022	1982	12.9	13.2	9.07	20.5	15.92
N392	011	022	1982	9.9	10.2	11.72	20.5	15.92
N392	011	024	1982	28.2	33.5	0.70	30.5	18.90
N392	011	024	1982	26.1	30.5	1.40	30.5	18.90
N392	011	024	1982	23.1	25.2	4.99	30.5	18.90
N392	011	024	1982	19.4	20.9	8.55	30.5	18.90
N392	011	024	1982	15.4	16.1	11.45	30.5	18.90
N392	011	024	1982	9.7	9.9	14.94	30.5	18.90
N392	011	053	1982	31.5	35.9	0.00	31.7	21.30
N392	011	053	1982	29.7	33.8	0.70	31.7	21.30
N392	011	053	1982	24.7	26.7	4.45	31.7	21.30
N392	011	053	1982	20.6	21.5	8.25	31.7	21.30
N392	011	053	1982	16.1	16.7	11.97	31.7	21.30
N392	011	053	1982	12.7	13.1	14.34	31.7	21.30
N392	012	012	1982	29.0	34.2	0.00	27.8	17.67
N392	012	012	1982	26.9	31.0	0.70	27.8	17.67
N392	012	012	1982	24.7	27.8	1.40	27.8	17.67
N392	012	012	1982	20.9	22.5	4.29	27.8	17.67
N392	012	012	1982	17.2	18.1	6.80	27.8	17.67
N392	012	012	1982	12.5	12.9	11.45	27.8	17.67
N392	012	019	1982	33.0	38.3	0.00	34.1	17.60
N392	012	019	1982	30.4	34.1	1.40	34.1	17.60

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	012	019	1982	27.0	29.0	3.65	34.1	17.60
N392	012	019	1982	22.9	23.8	6.16	34.1	17.60
N392	012	019	1982	19.1	19.9	8.90	34.1	17.60
N392	012	019	1982	13.4	13.8	11.31	34.1	17.60
N392	012	020	1982	34.7	39.7	0.00	34.7	18.57
N392	012	020	1982	32.8	37.2	0.70	34.7	18.57
N392	012	020	1982	31.0	34.7	1.40	34.7	18.57
N392	012	020	1982	27.8	30.4	3.20	34.7	18.57
N392	012	020	1982	22.8	24.3	5.14	34.7	18.57
N392	012	020	1982	13.6	14.4	10.94	34.7	18.57
N392	012	030	1982	26.2	29.8	0.00	27.2	16.00
N392	012	030	1982	25.1	28.5	0.70	27.2	16.00
N392	012	030	1982	24.0	27.2	1.40	27.2	16.00
N392	012	030	1982	16.3	17.2	6.44	27.2	16.00
N392	012	030	1982	11.4	11.7	10.50	27.2	16.00
N392	012	030	1982	7.4	7.6	13.02	27.2	16.00
N392	012	049	1982	30.3	35.6	0.00	31.4	20.50
N392	012	049	1982	28.2	31.4	1.40	31.4	20.50
N392	012	049	1982	24.4	25.6	3.95	31.4	20.50
N392	012	049	1982	20.9	21.5	7.19	31.4	20.50
N392	012	049	1982	16.1	16.5	12.08	31.4	20.50
N392	012	049	1982	11.2	11.4	14.32	31.4	20.50
N392	012	054	1982	28.2	31.8	0.00	27.0	17.50
N392	012	054	1982	26.2	29.4	0.70	27.0	17.50
N392	012	054	1982	24.2	27.0	1.40	27.0	17.50
N392	012	054	1982	20.1	22.1	3.68	27.0	17.50
N392	012	054	1982	17.0	17.8	6.85	27.0	17.50
N392	012	054	1982	7.9	8.1	13.53	27.0	17.50
N392	013	011	1982	25.6	28.5	0.00	24.5	17.29
N392	013	011	1982	24.0	26.5	0.70	24.5	17.29
N392	013	011	1982	22.3	24.5	1.40	24.5	17.29
N392	013	011	1982	18.9	19.6	5.37	24.5	17.29
N392	013	011	1982	16.4	16.7	8.60	24.5	17.29
N392	013	011	1982	13.9	14.1	10.90	24.5	17.29
N392	013	011	1982	11.4	11.6	11.69	24.5	17.29
N392	013	020	1982	30.2	35.1	0.00	29.7	20.14
N392	013	020	1982	28.4	32.4	0.70	29.7	20.14
N392	013	020	1982	26.6	29.7	1.40	29.7	20.14
N392	013	020	1982	18.9	19.8	8.17	29.7	20.14
N392	013	020	1982	14.3	14.9	11.85	29.7	20.14
N392	013	020	1982	9.6	9.8	15.14	29.7	20.14
N392	013	035	1982	30.2	33.9	0.00	29.5	20.90
N392	013	035	1982	28.2	31.7	0.70	29.5	20.90
N392	013	035	1982	26.3	29.5	1.40	29.5	20.90
N392	013	035	1982	22.7	24.1	5.56	29.5	20.90
N392	013	035	1982	19.0	19.6	9.37	29.5	20.90
N392	013	035	1982	9.4	9.6	16.55	29.5	20.90
N392	013	041	1982	24.6	27.6	0.00	24.0	18.95
N392	013	041	1982	23.0	25.8	0.70	24.0	18.95
N392	013	041	1982	20.2	21.2	3.15	24.0	18.95

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	013	041	1982	17.1	17.9	5.75	24.0	18.95
N392	013	041	1982	15.9	16.5	7.33	24.0	18.95
N392	013	041	1982	11.0	11.6	12.43	24.0	18.95
N392	013	041	1982	9.6	10.0	13.42	24.0	18.95
N392	013	043	1982	24.1	27.5	0.00	23.5	20.50
N392	013	043	1982	22.7	25.5	0.70	23.5	20.50
N392	013	043	1982	21.2	23.5	1.40	23.5	20.50
N392	013	043	1982	19.8	21.2	3.15	23.5	20.50
N392	013	043	1982	17.7	18.3	6.85	23.5	20.50
N392	013	043	1982	13.5	13.8	11.58	23.5	20.50
N392	013	045	1982	27.6	32.9	0.00	28.7	18.55
N392	013	045	1982	26.7	30.8	0.70	28.7	18.55
N392	013	045	1982	22.4	23.5	3.92	28.7	18.55
N392	013	045	1982	17.8	18.5	8.74	28.7	18.55
N392	013	045	1982	12.6	13.0	12.74	28.7	18.55
N392	013	045	1982	7.9	8.3	15.25	28.7	18.55
N392	014	011	1982	29.2	33.5	0.00	26.7	19.70
N392	014	011	1982	24.2	26.7	1.40	26.7	19.70
N392	014	011	1982	21.0	21.7	4.75	26.7	19.70
N392	014	011	1982	16.2	16.7	10.34	26.7	19.70
N392	014	011	1982	11.0	11.4	14.22	26.7	19.70
N392	014	014	1982	25.1	28.7	0.00	24.5	17.70
N392	014	014	1982	23.8	26.6	0.70	24.5	17.70
N392	014	014	1982	22.5	24.5	1.40	24.5	17.70
N392	014	014	1982	20.7	22.1	2.66	24.5	17.70
N392	014	014	1982	18.7	19.5	4.56	24.5	17.70
N392	014	014	1982	14.1	14.6	10.27	24.5	17.70
N392	014	014	1982	11.9	12.4	12.19	24.5	17.70
N392	014	016	1982	22.2	26.2	0.70	24.2	18.05
N392	014	016	1982	20.5	24.2	1.40	24.2	18.05
N392	014	016	1982	17.8	18.9	3.75	24.2	18.05
N392	014	016	1982	15.8	16.4	7.00	24.2	18.05
N392	014	016	1982	13.7	14.3	9.75	24.2	18.05
N392	014	016	1982	11.3	11.7	12.00	24.2	18.05
N392	014	016	1982	9.2	9.6	13.51	24.2	18.05
N392	014	024	1982	31.0	35.5	0.70	32.6	25.20
N392	014	024	1982	28.9	32.6	1.40	32.6	25.20
N392	014	024	1982	25.2	27.5	3.90	32.6	25.20
N392	014	024	1982	21.8	22.6	8.74	32.6	25.20
N392	014	024	1982	12.0	12.2	16.35	32.6	25.20
N392	014	024	1982	8.7	8.9	18.23	32.6	25.20
N392	014	034	1982	30.5	36.0	0.00	32.2	23.50
N392	014	034	1982	29.1	34.1	0.70	32.2	23.50
N392	014	034	1982	27.7	32.2	1.40	32.2	23.50
N392	014	034	1982	21.6	22.4	7.33	32.2	23.50
N392	014	034	1982	16.6	17.2	11.99	32.2	23.50
N392	014	034	1982	12.0	12.2	15.10	32.2	23.50
N392	014	051	1982	32.5	36.3	0.00	31.5	17.50
N392	014	051	1982	30.4	33.9	0.70	31.5	17.50
N392	014	051	1982	20.7	21.5	5.79	31.5	17.50

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	014	051	1982	16.6	17.4	8.61	31.5	17.50
N392	014	051	1982	10.4	11.0	11.73	31.5	17.50
N392	014	051	1982	7.2	7.6	14.32	31.5	17.50
N392	021	010	1982	36.7	42.2	0.00	37.2	20.50
N392	021	010	1982	35.1	39.7	0.70	37.2	20.50
N392	021	010	1982	33.6	37.2	1.40	37.2	20.50
N392	021	010	1982	26.0	27.0	6.63	37.2	20.50
N392	021	010	1982	21.7	22.5	9.70	37.2	20.50
N392	021	010	1982	16.6	17.4	12.03	37.2	20.50
N392	021	010	1982	6.4	6.8	17.00	37.2	20.50
N392	021	024	1982	28.4	32.0	0.00	27.4	20.75
N392	021	024	1982	26.6	29.7	0.70	27.4	20.75
N392	021	024	1982	24.8	27.4	1.40	27.4	20.75
N392	021	024	1982	21.0	21.6	6.60	27.4	20.75
N392	021	024	1982	17.0	17.6	10.75	27.4	20.75
N392	021	024	1982	7.3	7.6	17.25	27.4	20.75
N392	021	043	1982	37.8	42.9	0.00	37.7	22.10
N392	021	043	1982	35.9	40.3	0.70	37.7	22.10
N392	021	043	1982	30.2	32.1	4.44	37.7	22.10
N392	021	043	1982	25.3	26.2	7.71	37.7	22.10
N392	021	043	1982	20.8	21.2	10.15	37.7	22.10
N392	021	043	1982	12.9	13.2	13.95	37.7	22.10
N392	021	043	1982	7.6	7.8	17.12	37.7	22.10
N392	021	056	1982	22.8	26.0	0.00	22.8	18.64
N392	021	056	1982	22.1	24.4	0.70	22.8	18.64
N392	021	056	1982	21.4	22.8	1.40	22.8	18.64
N392	021	056	1982	19.9	20.6	4.20	22.8	18.64
N392	021	056	1982	15.2	15.8	10.14	22.8	18.64
N392	022	027	1982	25.7	30.7	0.00	26.5	19.85
N392	022	027	1982	24.4	28.6	0.70	26.5	19.85
N392	022	027	1982	23.1	26.5	1.40	26.5	19.85
N392	022	027	1982	20.5	21.6	5.07	26.5	19.85
N392	022	027	1982	16.1	16.7	10.12	26.5	19.85
N392	022	031	1982	34.9	40.9	0.00	36.7	24.60
N392	022	031	1982	29.4	31.8	3.70	36.7	24.60
N392	022	031	1982	24.7	25.8	8.10	36.7	24.60
N392	022	031	1982	20.6	21.5	11.80	36.7	24.60
N392	022	031	1982	15.9	16.6	15.90	36.7	24.60
N392	022	031	1982	11.4	11.9	19.35	36.7	24.60
N392	022	031	1982	9.7	10.1	19.80	36.7	24.60
N392	022	034	1982	28.0	32.1	0.00	26.3	22.90
N392	022	034	1982	26.0	29.2	0.70	26.3	22.90
N392	022	034	1982	24.1	26.3	1.40	26.3	22.90
N392	022	034	1982	20.8	21.6	5.05	26.3	22.90
N392	022	034	1982	7.1	7.3	14.92	26.3	22.90
N392	022	039	1982	28.3	32.0	0.00	26.2	21.43
N392	022	039	1982	26.1	29.1	0.70	26.2	21.43
N392	022	039	1982	24.0	26.2	1.40	26.2	21.43
N392	022	039	1982	21.1	21.8	3.94	26.2	21.43
N392	022	039	1982	16.4	16.8	11.03	26.2	21.43

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	022	039	1982	11.0	11.2	15.25	26.2	21.43
N392	022	047	1982	32.6	37.0	0.70	34.1	23.00
N392	022	047	1982	27.9	29.3	3.61	34.1	23.00
N392	022	047	1982	23.1	23.7	8.53	34.1	23.00
N392	022	047	1982	19.0	19.6	12.55	34.1	23.00
N392	022	047	1982	14.1	14.5	15.92	34.1	23.00
N392	022	047	1982	9.1	9.3	18.49	34.1	23.00
N392	022	060	1982	37.5	41.6	0.00	35.6	22.50
N392	022	060	1982	35.1	38.6	0.70	35.6	22.50
N392	022	060	1982	32.7	35.6	1.40	35.6	22.50
N392	022	060	1982	28.7	30.3	4.70	35.6	22.50
N392	022	060	1982	24.8	25.3	7.77	35.6	22.50
N392	022	060	1982	19.9	20.5	10.73	35.6	22.50
N392	023	015	1982	33.2	38.7	0.70	37.2	20.24
N392	023	015	1982	32.3	37.2	1.40	37.2	20.24
N392	023	015	1982	29.1	32.1	3.00	37.2	20.24
N392	023	015	1982	26.2	28.2	5.92	37.2	20.24
N392	023	015	1982	20.9	22.0	9.15	37.2	20.24
N392	023	015	1982	11.9	12.7	14.89	37.2	20.24
N392	023	015	1982	10.9	11.3	16.04	37.2	20.24
N392	023	018	1982	34.3	37.3	0.70	34.7	22.75
N392	023	018	1982	32.0	34.7	1.40	34.7	22.75
N392	023	018	1982	28.3	29.6	4.70	34.7	22.75
N392	023	018	1982	18.7	19.5	12.40	34.7	22.75
N392	023	018	1982	14.4	14.8	15.40	34.7	22.75
N392	023	018	1982	9.9	10.3	17.75	34.7	22.75
N392	023	024	1982	33.9	37.3	0.70	35.8	23.90
N392	023	024	1982	32.7	35.8	1.40	35.8	23.90
N392	023	024	1982	29.4	31.1	3.70	35.8	23.90
N392	023	024	1982	19.4	19.8	12.00	35.8	23.90
N392	023	024	1982	15.4	15.8	14.52	35.8	23.90
N392	023	024	1982	9.9	10.1	17.90	35.8	23.90
N392	023	042	1982	31.5	36.4	0.00	29.6	20.40
N392	023	042	1982	29.0	33.0	0.70	29.6	20.40
N392	023	042	1982	26.5	29.6	1.40	29.6	20.40
N392	023	042	1982	23.1	25.1	4.22	29.6	20.40
N392	023	042	1982	19.3	20.0	8.40	29.6	20.40
N392	023	042	1982	8.5	8.7	15.47	29.6	20.40
N392	023	057	1982	27.3	31.4	0.00	28.0	18.70
N392	023	057	1982	26.3	29.7	0.70	28.0	18.70
N392	023	057	1982	21.0	22.6	2.90	28.0	18.70
N392	023	057	1982	18.1	18.5	7.40	28.0	18.70
N392	023	057	1982	13.5	13.9	11.55	28.0	18.70
N392	023	057	1982	8.5	8.7	13.68	28.0	18.70
N392	024	002	1982	23.4	27.2	0.00	22.8	19.20
N392	024	002	1982	21.7	25.0	0.70	22.8	19.20
N392	024	002	1982	18.6	20.1	3.27	22.8	19.20
N392	024	002	1982	17.9	18.3	5.60	22.8	19.20
N392	024	002	1982	12.6	12.8	11.20	22.8	19.20
N392	024	002	1982	8.4	8.6	14.19	22.8	19.20

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	024	011	1982	31.0	36.5	0.00	31.7	19.90
N392	024	011	1982	29.7	34.1	0.70	31.7	19.90
N392	024	011	1982	28.3	31.7	1.40	31.7	19.90
N392	024	011	1982	24.3	25.9	4.47	31.7	19.90
N392	024	011	1982	16.6	17.1	10.58	31.7	19.90
N392	024	011	1982	12.5	12.8	12.91	31.7	19.90
N392	024	016	1982	25.7	29.4	0.00	25.0	20.60
N392	024	016	1982	24.2	27.2	0.70	25.0	20.60
N392	024	016	1982	22.7	25.0	1.40	25.0	20.60
N392	024	016	1982	19.4	20.2	3.69	25.0	20.60
N392	024	016	1982	14.6	15.0	10.12	25.0	20.60
N392	024	016	1982	7.5	7.7	15.61	25.0	20.60
N392	024	021	1982	24.4	29.2	0.00	23.8	18.50
N392	024	021	1982	22.8	26.5	0.70	23.8	18.50
N392	024	021	1982	21.2	23.8	1.40	23.8	18.50
N392	024	021	1982	19.2	21.2	2.85	23.8	18.50
N392	024	021	1982	13.7	13.9	9.52	23.8	18.50
N392	024	021	1982	10.6	10.8	12.19	23.8	18.50
N392	024	029	1982	31.5	37.7	0.00	33.3	21.80
N392	024	029	1982	29.5	33.3	1.40	33.3	21.80
N392	024	029	1982	25.7	28.0	2.80	33.3	21.80
N392	024	029	1982	22.4	23.5	6.29	33.3	21.80
N392	024	029	1982	16.9	17.3	11.29	33.3	21.80
N392	024	029	1982	12.0	12.4	14.79	33.3	21.80
N392	024	047	1982	31.3	34.5	0.00	31.5	20.92
N392	024	047	1982	28.9	31.5	1.40	31.5	20.92
N392	024	047	1982	25.7	26.6	4.30	31.5	20.92
N392	024	047	1982	21.5	22.3	8.79	31.5	20.92
N392	024	047	1982	15.5	16.1	13.71	31.5	20.92
N392	024	047	1982	9.8	10.2	16.62	31.5	20.92
N392	031	010	1982	31.1	34.0	0.70	32.1	20.30
N392	031	010	1982	29.9	32.1	1.40	32.1	20.30
N392	031	010	1982	26.1	27.0	4.48	32.1	20.30
N392	031	010	1982	21.7	22.4	7.74	32.1	20.30
N392	031	010	1982	16.6	17.0	10.63	32.1	20.30
N392	031	010	1982	11.9	12.1	12.41	32.1	20.30
N392	031	012	1982	32.6	37.0	0.00	33.6	23.16
N392	031	012	1982	30.1	33.6	1.40	33.6	23.16
N392	031	012	1982	26.6	28.5	4.00	33.6	23.16
N392	031	012	1982	22.5	23.6	8.00	33.6	23.16
N392	031	012	1982	18.3	18.9	11.76	33.6	23.16
N392	031	012	1982	9.4	9.8	17.16	33.6	23.16
N392	031	031	1982	24.8	28.8	0.00	26.8	19.30
N392	031	031	1982	24.5	27.8	0.70	26.8	19.30
N392	031	031	1982	24.2	26.8	1.40	26.8	19.30
N392	031	031	1982	21.0	21.7	4.59	26.8	19.30
N392	031	031	1982	11.4	11.8	13.15	26.8	19.30
N392	031	031	1982	8.5	8.7	15.35	26.8	19.30
N392	031	036	1982	26.2	29.4	0.00	25.2	20.40
N392	031	036	1982	24.7	27.3	0.70	25.2	20.40

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	031	036	1982	23.3	25.2	1.40	25.2	20.40
N392	031	036	1982	20.0	20.5	4.92	25.2	20.40
N392	031	036	1982	9.3	9.5	14.85	25.2	20.40
N392	031	050	1982	30.6	33.6	1.40	33.6	21.40
N392	031	050	1982	26.6	27.7	4.44	33.6	21.40
N392	031	050	1982	22.6	23.6	8.18	33.6	21.40
N392	031	050	1982	17.7	18.2	10.63	33.6	21.40
N392	031	050	1982	12.5	12.7	13.94	33.6	21.40
N392	031	050	1982	8.2	8.4	16.41	33.6	21.40
N392	031	059	1982	26.6	31.4	0.00	26.2	21.00
N392	031	059	1982	23.1	26.2	1.40	26.2	21.00
N392	031	059	1982	20.4	21.4	6.08	26.2	21.00
N392	031	059	1982	16.4	16.8	10.14	26.2	21.00
N392	031	059	1982	11.6	11.8	14.08	26.2	21.00
N392	031	059	1982	8.3	8.5	16.50	26.2	21.00
N392	032	015	1982	32.9	36.1	0.00	31.7	20.50
N392	032	015	1982	30.8	33.9	0.70	31.7	20.50
N392	032	015	1982	28.8	31.7	1.40	31.7	20.50
N392	032	015	1982	24.7	26.4	4.84	31.7	20.50
N392	032	015	1982	16.4	16.9	11.34	31.7	20.50
N392	032	015	1982	11.3	11.8	14.72	31.7	20.50
N392	032	025	1982	31.7	37.0	0.00	34.0	21.70
N392	032	025	1982	31.1	35.5	0.70	34.0	21.70
N392	032	025	1982	30.5	34.0	1.40	34.0	21.70
N392	032	025	1982	27.6	29.7	3.89	34.0	21.70
N392	032	025	1982	19.2	19.8	11.89	34.0	21.70
N392	032	025	1982	10.3	10.5	16.75	34.0	21.70
N392	032	029	1982	23.4	26.8	0.70	25.5	18.60
N392	032	029	1982	22.3	25.5	1.40	25.5	18.60
N392	032	029	1982	19.8	21.0	3.98	25.5	18.60
N392	032	029	1982	15.3	15.9	8.21	25.5	18.60
N392	032	029	1982	10.3	10.6	12.62	25.5	18.60
N392	032	039	1982	23.0	26.6	0.00	23.2	16.82
N392	032	039	1982	21.6	24.9	0.70	23.2	16.82
N392	032	039	1982	19.1	20.6	2.66	23.2	16.82
N392	032	039	1982	17.4	18.0	4.20	23.2	16.82
N392	032	039	1982	15.5	16.0	5.86	23.2	16.82
N392	032	039	1982	13.1	13.5	8.45	23.2	16.82
N392	032	045	1982	26.5	29.7	0.00	25.9	17.86
N392	032	045	1982	25.0	27.8	0.70	25.9	17.86
N392	032	045	1982	19.9	20.7	5.32	25.9	17.86
N392	032	045	1982	15.2	15.8	10.00	25.9	17.86
N392	032	045	1982	10.5	10.9	14.06	25.9	17.86
N392	032	054	1982	37.1	41.2	0.00	33.4	21.60
N392	032	054	1982	33.8	37.3	0.70	33.4	21.60
N392	032	054	1982	26.7	28.2	3.96	33.4	21.60
N392	032	054	1982	17.9	18.4	12.00	33.4	21.60
N392	032	054	1982	13.0	13.4	14.90	33.4	21.60
N392	032	054	1982	7.9	8.1	18.09	33.4	21.60
N392	033	011	1982	28.8	33.9	0.00	28.1	22.80

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	033	011	1982	27.0	31.0	0.70	28.1	22.80
N392	033	011	1982	22.6	23.5	3.95	28.1	22.80
N392	033	011	1982	17.6	18.4	10.14	28.1	22.80
N392	033	011	1982	12.7	13.1	14.64	28.1	22.80
N392	033	011	1982	9.7	10.1	16.92	28.1	22.80
N392	033	026	1982	27.6	31.6	0.00	28.0	20.85
N392	033	026	1982	26.4	29.8	0.70	28.0	20.85
N392	033	026	1982	25.3	28.0	1.40	28.0	20.85
N392	033	026	1982	21.7	22.8	4.16	28.0	20.85
N392	033	026	1982	16.9	17.7	10.14	28.0	20.85
N392	033	026	1982	11.9	12.5	14.93	28.0	20.85
N392	033	027	1982	20.8	25.3	0.00	22.1	18.00
N392	033	027	1982	17.9	19.6	3.45	22.1	18.00
N392	033	027	1982	16.3	17.3	5.45	22.1	18.00
N392	033	027	1982	14.1	14.5	8.55	22.1	18.00
N392	033	027	1982	11.6	12.0	10.89	22.1	18.00
N392	033	027	1982	8.7	8.9	13.00	22.1	18.00
N392	033	031	1982	24.0	26.7	0.00	22.3	15.76
N392	033	031	1982	22.2	24.5	0.70	22.3	15.76
N392	033	031	1982	18.7	19.6	2.90	22.3	15.76
N392	033	031	1982	14.6	14.8	8.02	22.3	15.76
N392	033	031	1982	12.1	12.3	10.00	22.3	15.76
N392	033	031	1982	9.6	9.8	11.76	22.3	15.76
N392	033	044	1982	20.3	23.8	0.00	19.4	15.00
N392	033	044	1982	18.6	21.6	0.70	19.4	15.00
N392	033	044	1982	16.9	19.4	1.40	19.4	15.00
N392	033	044	1982	16.0	17.0	4.05	19.4	15.00
N392	033	044	1982	13.9	14.5	7.02	19.4	15.00
N392	033	044	1982	11.2	11.6	9.49	19.4	15.00
N392	033	050	1982	28.2	33.5	0.70	28.7	18.00
N392	033	050	1982	24.9	28.7	1.40	28.7	18.00
N392	033	050	1982	21.4	23.6	3.57	28.7	18.00
N392	033	050	1982	17.9	18.5	6.98	28.7	18.00
N392	033	050	1982	13.3	13.7	10.65	28.7	18.00
N392	033	050	1982	8.5	8.7	13.55	28.7	18.00
N392	034	010	1982	24.3	27.7	0.00	25.7	19.20
N392	034	010	1982	22.6	25.7	1.40	25.7	19.20
N392	034	010	1982	19.0	20.2	5.22	25.7	19.20
N392	034	010	1982	15.1	15.6	8.94	25.7	19.20
N392	034	010	1982	10.0	10.2	13.11	25.7	19.20
N392	034	010	1982	7.4	7.6	14.83	25.7	19.20
N392	034	033	1982	34.0	37.1	0.70	34.4	22.50
N392	034	033	1982	28.0	29.6	3.87	34.4	22.50
N392	034	033	1982	23.3	23.9	8.46	34.4	22.50
N392	034	033	1982	19.7	20.1	11.44	34.4	22.50
N392	034	033	1982	13.8	14.2	14.35	34.4	22.50
N392	034	033	1982	8.5	8.7	17.53	34.4	22.50
N392	034	041	1982	29.2	33.1	0.70	30.1	18.79
N392	034	041	1982	27.3	30.1	1.40	30.1	18.79
N392	034	041	1982	20.0	20.7	7.15	30.1	18.79

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	034	041	1982	15.1	15.6	10.98	30.1	18.79
N392	034	041	1982	12.1	12.5	13.26	30.1	18.79
N392	034	041	1982	9.7	10.1	15.09	30.1	18.79
N392	034	046	1982	33.0	35.8	0.00	29.6	19.80
N392	034	046	1982	29.8	32.7	0.70	29.6	19.80
N392	034	046	1982	26.7	29.6	1.40	29.6	19.80
N392	034	046	1982	23.6	24.2	4.14	29.6	19.80
N392	034	046	1982	9.8	10.0	14.53	29.6	19.80
N392	034	046	1982	7.7	7.9	16.00	29.6	19.80
N392	034	050	1982	34.2	40.0	0.00	34.6	21.50
N392	034	050	1982	26.8	28.7	4.15	34.6	21.50
N392	034	050	1982	23.8	24.6	6.73	34.6	21.50
N392	034	050	1982	19.6	20.1	10.00	34.6	21.50
N392	034	050	1982	13.8	14.2	14.45	34.6	21.50
N392	034	050	1982	9.1	9.3	17.55	34.6	21.50
N392	034	052	1982	35.7	40.4	0.00	36.8	20.60
N392	034	052	1982	33.3	36.8	1.40	36.8	20.60
N392	034	052	1982	29.8	31.8	3.54	36.8	20.60
N392	034	052	1982	24.8	25.9	6.05	36.8	20.60
N392	034	052	1982	20.0	20.9	8.35	36.8	20.60
N392	034	052	1982	9.9	10.2	14.04	36.8	20.60
N392	034	052	1982	7.1	7.3	16.10	36.8	20.60

Appendix 12. Sectional measurement data for Pigeon Valley.
(20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	001	004	1973	23.3	28.4	1.40	28.4	23.95
N238	001	004	1973	20.1	22.6	6.10	28.4	23.95
N238	001	004	1973	12.4	13.2	16.09	28.4	23.95
N238	001	020	1973	32.1	34.0	12.19	48.0	35.75
N238	001	020	1973	31.0	32.8	13.47	48.0	35.75
N238	001	020	1973	28.7	30.2	15.97	48.0	35.75
N238	001	020	1973	26.4	27.7	18.17	48.0	35.75
N238	001	024	1973	40.3	46.7	0.00	43.7	31.66
N238	001	024	1973	38.2	43.7	1.40	43.7	31.66
N238	001	024	1973	31.2	33.5	8.96	43.7	31.66
N236	001	024	1973	29.0	30.7	12.19	43.7	31.66
N238	001	025	1973	23.1	30.1	0.00	26.7	28.64
N238	001	025	1973	21.1	24.1	2.74	26.7	28.64
N238	001	025	1973	19.1	20.6	6.10	26.7	28.64
N238	001	027	1973	37.3	44.2	1.40	44.2	34.22
N238	001	027	1973	34.8	39.1	3.32	44.2	34.22
N238	001	027	1973	32.9	35.6	6.10	44.2	34.22
N238	001	027	1973	10.4	11.2	29.41	44.2	34.22
N238	002	002	1973	30.8	34.0	3.66	39.1	33.18
N238	002	002	1973	27.2	29.0	8.69	39.1	33.18
N238	002	002	1973	15.0	16.3	22.71	39.1	33.18
N238	002	002	1973	10.3	11.2	26.52	39.1	33.18
N238	002	004	1973	21.3	26.9	0.70	24.6	25.32
N238	002	004	1973	16.7	19.6	4.63	24.6	25.32
N238	002	004	1973	15.7	17.0	7.25	24.6	25.32
N238	002	032	1973	41.3	50.2	0.00	47.8	32.42
N238	002	032	1973	40.8	49.0	0.70	47.8	32.42
N238	002	032	1973	21.1	22.4	19.32	47.8	32.42
N238	002	032	1973	18.5	19.8	21.61	47.8	32.42
N238	002	033	1973	47.7	54.9	0.70	50.8	34.80
N238	002	033	1973	38.9	45.7	4.02	50.8	34.80
N238	002	033	1973	26.4	27.9	17.98	50.8	34.80
N238	002	033	1973	19.3	20.3	23.74	50.8	34.80
N238	002	033	1973	4.6	5.1	32.13	50.8	34.80
N238	002	034	1973	28.7	34.9	0.00	31.7	31.51
N238	002	034	1973	24.7	26.7	3.41	31.7	31.51
N238	002	034	1973	8.1	8.9	27.13	31.7	31.51
N238	003	002	1973	23.4	28.4	1.40	28.4	28.40
N238	003	002	1973	17.3	18.3	12.95	28.4	28.40
N238	003	002	1973	5.1	5.6	25.66	28.4	28.40
N238	003	014	1973	41.1	51.1	0.00	47.5	34.58
N238	003	014	1973	39.2	45.0	2.29	47.5	34.58
N238	003	014	1973	34.3	38.4	6.10	47.5	34.58
N238	003	014	1973	31.5	34.8	9.60	47.5	34.58
N238	003	022	1973	25.5	29.5	3.05	32.0	27.82
N238	003	022	1973	23.8	26.9	5.03	32.0	27.82
N238	003	022	1973	3.6	4.1	25.45	32.0	27.82
N238	003	024	1973	40.0	46.7	1.40	46.7	33.00
N238	003	024	1973	30.0	31.5	11.40	46.7	33.00
N238	003	024	1973	15.3	16.3	24.54	46.7	33.00
N238	003	024	1973	12.7	13.7	25.88	46.7	33.00
N238	003	032	1973	47.7	54.6	0.70	49.5	35.13

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N238	003	032	1973	34.6	36.8	11.22	49.5	35.13
N238	003	032	1973	25.3	26.7	19.96	49.5	35.13
N238	003	032	1973	22.8	24.1	21.58	49.5	35.13
N238	003	032	1973	10.4	11.4	29.54	49.5	35.13
N238	004	005	1973	20.9	23.1	4.02	28.2	28.82
N238	004	005	1973	20.0	21.6	6.10	28.2	28.82
N238	004	005	1973	16.8	17.8	12.19	28.2	28.82
N238	004	013	1973	20.6	24.1	2.23	26.7	28.34
N238	004	013	1973	19.2	21.6	3.96	26.7	28.34
N238	004	013	1973	14.4	15.7	12.19	26.7	28.34
N238	004	019	1973	32.4	39.6	1.98	42.2	32.30
N238	004	019	1973	25.8	27.7	12.19	42.2	32.30
N238	004	019	1973	20.4	21.8	18.68	42.2	32.30
N238	004	019	1973	10.9	11.7	25.97	42.2	32.30
N238	004	027	1973	34.4	41.1	1.40	41.1	36.38
N238	004	027	1973	29.3	33.5	5.06	41.1	36.38
N238	004	027	1973	28.6	31.7	6.10	41.1	36.38
N238	004	027	1973	9.9	10.7	28.96	41.1	36.38
N238	004	030	1973	36.4	44.7	0.00	39.1	33.58
N238	004	030	1973	24.6	26.4	12.19	39.1	33.58
N238	004	030	1973	22.3	23.9	15.21	39.1	33.58
N238	004	030	1973	12.7	13.7	25.60	39.1	33.58
N238	005	004	1973	23.8	29.4	0.00	24.4	23.73
N238	005	004	1973	15.7	16.8	7.86	24.4	23.73
N238	005	004	1973	3.6	4.1	22.13	24.4	23.73
N238	005	013	1973	27.4	31.7	4.05	36.8	28.73
N238	005	013	1973	22.4	24.1	11.16	36.8	28.73
N238	005	013	1973	20.1	21.6	14.02	36.8	28.73
N238	005	013	1973	10.5	11.4	23.13	36.8	28.73
N238	005	015	1973	19.9	24.9	0.70	23.4	22.64
N238	005	015	1973	18.5	23.4	1.40	23.4	22.64
N238	005	021	1973	31.9	39.4	0.00	35.8	26.66
N238	005	021	1973	30.5	37.6	0.70	35.8	26.66
N238	005	021	1973	23.5	25.7	8.84	35.8	26.66
N238	005	021	1973	20.9	22.4	12.19	35.8	26.66
N238	006	020	1973	15.7	17.0	7.16	22.1	26.14
N238	006	020	1973	8.6	9.4	18.26	22.1	26.14
N238	006	024	1973	36.7	43.6	0.00	38.6	30.32
N238	006	024	1973	34.0	38.6	1.40	38.6	30.32
N238	006	024	1973	17.3	18.3	19.81	38.6	30.32
N238	006	024	1973	9.9	10.7	25.15	38.6	30.32
N238	006	033	1973	36.3	43.4	1.40	43.4	34.43
N238	006	033	1973	24.3	25.7	14.30	43.4	34.43
N238	006	033	1973	21.9	23.1	17.13	43.4	34.43
N238	006	033	1973	4.8	5.3	31.39	43.4	34.43
N238	006	039	1973	33.7	41.1	1.40	41.1	34.52
N238	006	039	1973	30.5	36.1	4.30	41.1	34.52
N238	006	039	1973	7.2	8.1	30.18	41.1	34.52
N238	006	039	1973	4.8	5.6	31.85	41.1	34.52
N238	006	050	1973	19.0	23.9	1.40	23.9	25.41
N238	006	050	1973	13.5	14.5	12.19	23.9	25.41
N238	006	050	1973	10.6	11.2	16.31	23.9	25.41

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	001	006	1973	9.3	10.2	1.40	10.2	11.22
N239	001	006	1973	2.0	2.5	9.75	10.2	11.22
N239	001	013	1973	8.9	9.7	4.54	14.7	11.88
N239	001	013	1973	5.0	5.8	7.96	14.7	11.88
N239	001	019	1973	3.7	4.1	9.14	9.1	12.25
N239	001	019	1973	2.5	2.8	10.70	9.1	12.25
N239	001	021	1973	8.3	9.1	10.58	19.3	16.63
N239	001	021	1973	6.1	6.6	12.50	19.3	16.63
N239	001	025	1973	13.8	16.3	0.70	15.0	13.77
N239	001	025	1973	13.0	15.0	1.40	15.0	13.77
N235	001	041	1973	7.8	8.6	11.16	21.3	17.00
N239	001	041	1973	5.6	6.1	13.11	21.3	17.00
N239	001	043	1973	10.4	11.9	0.70	11.4	12.61
N239	001	043	1973	3.5	3.8	9.88	11.4	12.61
N239	001	048	1973	5.0	5.8	11.52	18.5	14.80
N239	001	048	1973	2.8	3.3	13.47	18.5	14.80
N239	001	052	1973	7.3	8.1	11.28	20.8	15.84
N239	001	052	1973	5.1	5.6	13.26	20.8	15.84
N239	002	001	1973	15.8	17.3	1.86	18.5	13.55
N239	002	001	1973	12.5	13.5	5.03	18.5	13.55
N239	002	001	1973	11.4	12.4	6.34	18.5	13.55
N239	002	009	1973	6.4	6.9	7.32	9.9	13.07
N239	002	009	1973	4.1	4.6	10.12	9.9	13.07
N239	002	022	1973	10.0	12.0	0.00	9.4	10.93
N239	002	022	1973	6.6	7.1	5.00	9.4	10.93
N239	002	024	1973	16.4	19.2	0.00	16.8	14.01
N239	002	024	1973	14.2	15.5	2.50	16.8	14.01
N239	002	024	1973	10.9	11.7	5.30	16.8	14.01
N239	002	025	1973	12.8	15.2	0.00	13.2	13.61
N239	002	025	1973	11.7	13.2	1.40	13.2	13.61
N239	002	033	1973	14.6	18.0	0.70	16.8	13.19
N239	002	033	1973	10.4	11.7	4.94	16.8	13.19
N239	002	033	1973	3.6	4.1	11.25	16.8	13.19
N239	002	046	1973	17.3	21.6	0.70	20.6	13.65
N239	002	046	1973	15.3	18.0	2.62	20.6	13.65
N239	002	049	1973	8.0	9.2	0.00	8.6	9.44
N239	002	049	1973	6.6	7.1	3.32	8.6	9.44
N239	002	058	1973	12.8	15.7	0.00	12.7	13.25
N239	002	058	1973	10.6	11.4	3.72	12.7	13.25
N239	003	012	1973	6.6	7.4	3.72	8.6	10.35
N239	003	012	1973	3.1	3.6	8.53	8.6	10.35
N239	003	016	1973	16.9	19.6	0.00	18.0	12.40
N239	003	016	1973	4.8	5.3	9.45	18.0	12.40
N239	003	020	1973	19.3	23.4	0.00	19.8	14.89
N239	003	020	1973	6.3	7.1	10.27	19.8	14.89
N239	003	022	1973	10.9	11.9	3.11	14.5	12.64
N239	003	022	1973	9.7	10.7	4.63	14.5	12.64
N239	003	029	1973	11.2	13.2	0.70	11.9	12.58
N239	003	029	1973	10.8	11.9	1.40	11.9	12.58
N239	003	031	1973	6.6	7.1	2.74	7.9	10.35
N239	003	031	1973	5.1	5.6	5.85	7.9	10.35
N239	003	038	1973	18.1	21.6	1.40	21.6	16.45

Appendix 12. Sectional measurement data for Pigeon Valley. (cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	003	038	1973	3.3	3.8	14.63	21.6	16.45
N239	003	044	1973	15.0	16.0	4.02	21.1	14.93
N239	003	044	1973	12.5	13.5	5.85	21.1	14.93
N239	003	046	1973	3.0	3.3	7.01	7.1	8.77
N239	003	046	1973	2.2	2.5	7.47	7.1	8.77
N239	004	008	1973	20.3	23.1	1.40	23.1	16.36
N239	004	008	1973	11.7	13.0	7.80	23.1	16.36
N239	004	011	1973	7.8	8.6	2.26	9.4	11.85
N239	004	011	1973	5.8	6.3	6.86	9.4	11.85
N239	004	022	1973	8.9	9.7	6.00	14.7	12.30
N239	004	022	1973	4.1	4.6	10.15	14.7	12.30
N239	004	024	1973	8.3	9.1	1.40	9.1	10.00
N239	004	024	1973	3.3	3.8	8.44	9.1	10.00
N239	004	026	1973	17.3	19.5	0.00	17.5	14.41
N239	004	026	1973	16.5	18.5	0.70	17.5	14.41
N239	004	032	1973	12.9	15.0	0.70	14.2	12.76
N239	004	032	1973	3.6	4.1	10.49	14.2	12.76
N239	004	042	1973	8.2	10.5	0.00	8.9	10.38
N239	004	042	1973	5.0	5.8	5.67	8.9	10.38
N239	004	048	1973	13.0	14.0	4.66	16.5	15.35
N239	004	048	1973	10.4	11.4	7.47	16.5	15.35
N239	004	048	1973	6.8	7.6	10.24	16.5	15.35
N239	004	059	1973	17.1	19.6	0.70	16.8	13.65
N239	004	059	1973	3.6	4.1	11.58	16.8	13.65
N239	005	001	1973	13.5	14.5	3.05	15.7	15.23
N239	005	001	1973	12.4	13.2	4.63	15.7	15.23
N239	005	001	1973	11.1	11.9	6.31	15.7	15.23
N239	005	013	1973	6.6	7.4	4.54	9.7	11.51
N239	005	013	1973	3.1	3.6	8.96	9.7	11.51
N239	005	025	1973	15.6	19.6	0.70	18.8	14.75
N239	005	025	1973	3.1	3.6	13.23	18.8	14.75
N239	005	029	1973	12.0	13.5	1.40	13.5	13.10
N239	005	029	1973	5.0	5.8	9.72	13.5	13.10
N239	005	032	1973	13.2	14.5	3.26	17.0	14.32
N239	005	032	1973	12.2	13.2	4.05	17.0	14.32
N239	005	032	1973	4.8	5.6	11.22	17.0	14.32
N239	005	036	1973	6.3	7.1	6.49	9.4	13.16
N239	005	036	1973	3.0	3.3	11.31	9.4	13.16
N239	005	043	1973	8.1	8.9	6.37	12.7	14.04
N239	005	043	1973	6.8	7.6	8.23	12.7	14.04
N239	005	053	1973	6.8	7.6	3.20	8.4	10.87
N239	005	053	1973	4.8	5.3	7.22	8.4	10.87
N239	005	054	1973	13.9	15.2	3.08	17.8	13.07
N239	005	054	1973	9.2	10.2	6.77	17.8	13.07
N239	006	002	1973	7.9	8.9	2.99	10.2	12.55
N239	006	002	1973	4.6	5.1	8.35	10.2	12.55
N239	006	006	1973	4.1	4.6	9.57	12.2	12.46
N239	006	006	1973	2.8	3.3	10.42	12.2	12.46
N239	006	017	1973	14.0	16.0	1.40	16.0	15.20
N239	006	017	1973	13.2	14.7	2.32	16.0	15.20
N239	006	017	1973	8.9	9.7	7.28	16.0	15.20
N239	006	032	1973	7.1	8.1	7.62	14.5	13.19

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	032	1973	4.8	5.6	9.72	14.5	13.19
N239	006	040	1973	6.6	7.1	3.72	8.6	10.93
N239	006	040	1973	5.1	5.6	6.16	8.6	10.93
N239	006	047	1973	11.4	12.7	4.36	16.5	13.75
N239	006	047	1973	9.2	10.2	6.52	16.5	13.75
N239	006	047	1973	3.3	3.8	11.73	16.5	13.75
N239	006	050	1973	8.1	8.9	2.59	10.4	9.07
N239	006	050	1973	4.8	5.3	6.22	10.4	9.07
N239	006	056	1973	15.2	17.3	1.40	17.3	14.38
N239	006	056	1973	12.2	13.5	4.48	17.3	14.38
N239	006	056	1973	4.1	4.6	11.73	17.3	14.38
N239	006	059	1973	14.2	15.7	4.42	21.6	15.08
N239	006	059	1973	10.9	11.9	7.32	21.6	15.08
N239	001	008	1978	20.5	21.8	2.30	24.8	16.30
N239	001	008	1978	15.9	16.3	7.09	24.8	16.30
N239	001	037	1978	21.6	26.3	0.70	23.5	17.46
N239	001	037	1978	18.4	19.3	3.95	23.5	17.46
N239	001	050	1978	28.0	31.7	0.00	30.5	20.23
N239	001	050	1978	27.7	30.5	1.40	30.5	20.23
N239	001	059	1978	35.4	40.9	0.00	31.1	14.75
N239	001	059	1978	14.8	15.8	9.88	31.1	14.75
N239	001	999	1978	26.3	30.6	0.70	29.0	20.67
N239	001	999	1978	8.7	9.1	15.68	29.0	20.67
N239	002	003	1978	12.0	12.4	8.56	20.4	16.35
N239	002	003	1978	5.4	5.6	13.73	20.4	16.35
N239	002	017	1978	28.0	31.9	0.70	28.6	19.61
N239	002	050	1978	7.4	7.8	14.94	27.8	19.03
N239	002	053	1978	17.8	18.8	6.96	28.9	16.82
N239	002	999	1978	19.3	23.5	0.70	21.2	19.06
N239	002	999	1978	15.3	16.0	7.38	21.2	19.06
N239	003	003	1978	18.3	22.6	0.00	19.2	15.81
N239	003	003	1978	15.7	16.6	3.13	19.2	15.81
N239	003	030	1978	22.3	27.1	0.00	22.5	21.78
N239	003	030	1978	11.7	12.1	13.11	22.5	21.78
N239	003	040	1978	10.6	11.0	8.22	18.6	16.02
N239	003	040	1978	8.1	8.5	10.55	18.6	16.02
N239	003	043	1978	17.4	18.9	3.42	23.6	17.51
N239	003	043	1978	6.5	6.7	14.34	23.6	17.51
N239	003	057	1978	18.2	19.8	2.84	22.4	16.52
N239	003	057	1978	14.6	15.0	7.04	22.4	16.52
N239	004	005	1978	24.2	28.7	1.40	28.7	21.67
N239	004	005	1978	9.1	9.4	15.61	28.7	21.67
N239	004	020	1978	14.0	14.4	13.90	29.3	22.18
N239	004	025	1978	18.2	23.1	0.70	21.1	17.54
N239	004	025	1978	8.3	8.7	12.71	21.1	17.54
N239	004	027	1978	9.6	9.8	16.28	26.4	21.26
N239	004	033	1978	18.7	22.5	0.70	20.4	17.66
N239	004	033	1978	7.8	8.0	13.94	20.4	17.66
N239	005	006	1978	16.1	18.5	0.00	16.1	15.33
N239	005	018	1978	17.0	20.6	0.00	18.0	17.53
N239	005	018	1978	10.4	10.6	8.94	18.0	17.53
N239	005	023	1978	19.3	21.2	2.57	23.5	19.46

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	005	023	1978	10.2	10.6	12.53	23.5	19.46
N239	005	031	1978	15.4	16.0	7.86	23.8	18.03
N239	005	031	1978	8.7	8.9	13.41	23.8	18.03
N239	005	035	1978	21.8	26.9	0.00	23.1	18.92
N239	005	035	1978	5.4	5.6	15.79	23.1	18.92
N239	006	014	1978	14.6	17.1	0.00	15.5	15.43
N239	006	018	1978	19.2	22.1	0.70	20.4	18.36
N239	006	018	1978	18.0	20.4	1.40	20.4	18.36
N239	006	042	1978	13.7	15.3	1.40	15.3	14.79
N239	006	999	1978	12.2	12.6	8.20	20.4	18.51
N239	006	999	1978	10.0	10.3	10.74	20.4	18.51
N239	006	199	1978	11.3	11.7	10.97	21.6	19.97
N239	006	199	1978	8.9	9.1	13.98	21.6	19.97
N239	001	004	1982	32.2	38.1	0.70	34.3	23.50
N239	001	004	1982	22.9	24.1	6.07	34.3	23.50
N239	001	012	1982	24.4	25.8	5.25	36.0	22.70
N239	001	012	1982	7.3	7.7	18.70	36.0	22.70
N239	001	031	1982	31.1	34.7	1.40	34.7	24.29
N239	001	031	1982	23.8	24.4	9.20	34.7	24.29
N239	001	035	1982	18.4	19.2	14.35	39.3	24.87
N239	001	035	1982	14.0	14.6	17.60	39.3	24.87
N239	002	006	1982	26.1	29.0	1.40	29.0	19.73
N239	002	015	1982	37.5	42.1	0.70	39.0	22.47
N239	002	015	1982	13.7	14.3	17.72	39.0	22.47
N239	002	042	1982	17.9	18.8	8.18	28.9	21.80
N239	002	053	1982	33.3	37.7	1.40	37.7	20.13
N239	002	053	1982	29.4	32.7	3.95	37.7	20.13
N239	003	023	1982	8.5	8.7	18.51	28.4	22.81
N239	003	030	1982	25.9	31.4	0.70	29.2	23.20
N239	003	003	1982	17.0	17.6	4.99	22.8	15.20
N239	003	003	1982	9.5	10.1	11.45	22.8	15.20
N239	003	014	1982	7.5	7.9	14.87	25.0	18.10
N239	004	003	1982	29.2	32.5	0.70	29.3	23.60
N239	004	003	1982	23.6	24.6	4.36	29.3	23.60
N239	004	020	1982	38.5	44.3	0.00	38.7	25.58
N239	004	020	1982	31.7	33.7	3.87	38.7	25.58
N239	004	046	1982	25.5	27.3	3.78	32.6	21.10
N239	004	046	1982	11.9	12.3	15.03	32.6	21.10
N239	004	056	1982	26.4	29.8	1.40	29.8	23.80
N239	005	006	1982	19.8	23.5	0.70	21.3	18.67
N239	005	006	1982	13.0	13.4	9.75	21.3	18.67
N239	005	012	1982	30.5	34.1	0.70	31.5	25.54
N239	005	012	1982	11.3	11.6	19.32	31.5	25.54
N239	005	031	1982	25.1	26.1	4.02	31.1	24.62
N239	005	031	1982	11.0	11.4	17.18	31.1	24.62
N239	005	057	1982	21.2	24.0	1.40	24.0	19.55
N239	005	057	1982	18.3	18.9	5.40	24.0	19.55
N239	006	027	1982	18.0	20.4	2.71	23.0	17.48
N239	006	027	1982	16.6	17.8	3.88	23.0	17.48
N239	006	031	1982	15.0	15.4	9.34	25.7	20.55
N239	006	041	1982	20.0	23.1	1.40	23.1	19.20
N239	006	041	1982	17.4	18.0	5.64	23.1	19.20

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N239	006	048	1982	15.1	15.5	10.19	25.5	22.45
N392	011	001	1974	11.0	11.8	2.20	12.8	7.99
N392	011	001	1974	6.1	6.8	4.51	12.8	7.99
N392	011	002	1974	12.9	14.0	0.00	11.0	7.24
N392	011	002	1974	10.2	11.0	1.40	11.0	7.24
N392	011	016	1974	6.0	6.5	1.40	6.5	4.38
N392	011	017	1974	5.5	6.1	1.96	7.1	5.07
N392	011	034	1974	7.2	7.7	0.70	7.4	5.48
N392	011	059	1974	11.3	12.1	0.70	10.5	7.01
N392	011	059	1974	5.1	5.5	4.67	10.5	7.01
N392	012	003	1974	7.9	8.5	1.99	9.5	6.09
N392	012	032	1974	6.7	7.5	3.60	10.5	6.74
N392	012	032	1974	4.9	5.5	5.08	10.5	6.74
N392	012	046	1974	8.0	8.8	2.30	10.8	7.61
N392	012	046	1974	7.0	7.8	3.35	10.8	7.61
N392	012	047	1974	6.3	6.6	0.00	5.8	4.59
N392	012	053	1974	4.8	5.2	2.44	6.2	4.99
N392	012	055	1974	5.1	5.5	1.66	6.5	4.78
N392	013	006	1974	4.8	5.4	1.93	5.9	4.72
N392	013	011	1974	5.7	6.3	1.73	6.8	5.42
N392	013	012	1974	11.2	12.6	0.70	11.6	8.14
N392	013	012	1974	5.0	5.6	5.00	11.6	8.14
N392	013	021	1974	4.5	5.0	2.97	7.0	5.34
N392	013	035	1974	10.5	11.2	1.40	11.2	6.74
N392	013	035	1974	9.4	10.2	2.00	11.2	6.74
N392	013	036	1974	11.6	12.6	0.00	10.2	7.11
N392	013	036	1974	6.5	7.2	3.70	10.2	7.11
N392	014	036	1974	6.7	7.3	0.00	6.1	5.04
N392	014	044	1974	10.6	11.5	1.40	11.5	7.81
N392	014	044	1974	6.7	7.5	3.65	11.5	7.81
N392	014	046	1974	9.8	10.7	1.86	11.7	6.87
N392	014	046	1974	5.9	6.7	4.05	11.7	6.87
N392	014	049	1974	4.5	5.2	2.60	6.7	5.54
N392	014	054	1974	10.1	11.0	1.94	13.0	7.46
N392	014	054	1974	7.2	8.0	3.84	13.0	7.46
N392	014	060	1974	8.7	9.6	0.00	7.8	5.43
N392	014	060	1974	6.1	6.8	2.16	7.8	5.43
N392	021	010	1974	11.8	13.0	0.70	12.5	6.67
N392	021	010	1974	8.6	9.5	2.90	12.5	6.67
N392	021	014	1974	10.7	12.0	0.70	11.2	6.73
N392	021	014	1974	6.4	7.2	3.65	11.2	6.73
N392	021	016	1974	6.0	6.6	1.40	6.6	5.09
N392	021	018	1974	8.6	9.5	0.70	8.6	5.71
N392	021	019	1974	9.7	10.7	2.10	12.7	7.51
N392	021	019	1974	7.8	8.7	3.60	12.7	7.51
N392	021	020	1974	7.0	7.9	0.00	7.1	4.49
N392	022	001	1974	12.0	13.3	0.70	12.2	8.23
N392	022	001	1974	6.3	7.2	5.13	12.2	8.23
N392	022	037	1974	5.9	6.5	2.53	7.5	5.74
N392	022	050	1974	9.2	9.8	0.70	9.1	6.82
N392	022	054	1974	9.1	9.8	0.00	8.6	6.71
N392	022	055	1974	10.7	11.5	2.06	12.5	7.82

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	022	055	1974	9.9	10.5	2.74	12.5	7.82
N392	022	060	1974	5.5	6.2	5.17	14.2	7.79
N392	022	060	1974	4.4	5.2	5.63	14.2	7.79
N392	023	005	1974	6.2	6.8	1.40	6.8	4.75
N392	023	038	1974	9.3	10.1	0.70	9.4	6.37
N392	023	040	1974	12.9	14.1	1.40	14.1	7.09
N392	023	040	1974	6.5	7.1	3.81	14.1	7.09
N392	023	046	1974	11.1	11.7	1.99	12.7	7.80
N392	023	046	1974	5.1	5.7	4.99	12.7	7.80
N392	023	054	1974	10.3	11.0	2.15	12.0	8.71
N392	023	054	1974	6.2	7.0	5.39	12.0	8.71
N392	023	058	1974	4.9	5.6	2.19	7.1	5.02
N392	024	003	1974	7.6	8.2	3.38	10.2	7.74
N392	024	003	1974	4.6	5.2	5.11	10.2	7.74
N392	024	008	1974	5.8	6.4	2.21	8.4	5.15
N392	024	009	1974	14.3	15.8	0.00	11.4	7.92
N392	024	009	1974	6.6	7.4	4.17	11.4	7.92
N392	024	010	1974	10.6	11.6	1.40	11.6	7.56
N392	024	010	1974	9.7	10.6	1.68	11.6	7.56
N392	024	021	1974	4.9	5.3	2.87	9.3	5.30
N392	024	034	1974	8.0	9.0	0.70	8.2	5.31
N392	031	004	1974	4.7	5.2	2.75	8.2	5.98
N392	031	008	1974	12.4	13.4	1.40	13.4	6.98
N392	031	008	1974	5.6	6.4	4.13	13.4	6.98
N392	031	010	1974	11.2	12.1	1.91	14.1	6.91
N392	031	010	1974	8.2	9.1	3.22	14.1	6.91
N392	031	012	1974	14.2	15.6	0.70	13.6	7.84
N392	031	012	1974	8.8	9.6	3.58	13.6	7.84
N392	031	059	1974	7.4	8.0	1.40	8.0	5.67
N392	031	060	1974	7.3	7.9	2.06	8.9	5.41
N392	032	007	1974	8.8	9.6	2.30	11.6	6.65
N392	032	007	1974	6.8	7.6	3.24	11.6	6.65
N392	032	009	1974	6.2	6.9	1.40	6.9	5.50
N392	032	017	1974	4.9	5.7	2.00	7.2	4.71
N392	032	019	1974	10.0	10.8	0.70	10.0	6.90
N392	032	019	1974	8.4	9.0	1.70	10.0	6.90
N392	032	023	1974	5.4	6.0	1.90	6.5	5.46
N392	032	025	1974	12.0	13.2	0.00	11.2	6.62
N392	032	025	1974	7.4	8.2	2.53	11.2	6.62
N392	033	001	1974	13.5	14.5	0.00	10.5	7.42
N392	033	001	1974	7.8	8.5	3.13	10.5	7.42
N392	033	002	1974	6.3	7.1	0.70	6.2	5.60
N392	033	003	1974	7.5	8.3	0.00	6.7	5.71
N392	033	004	1974	5.3	5.9	1.89	6.4	4.96
N392	033	009	1974	4.3	5.0	3.59	9.0	6.02
N392	033	055	1974	11.5	12.5	1.40	12.5	7.68
N392	033	055	1974	6.9	7.5	3.84	12.5	7.68
N392	034	001	1974	10.2	11.0	0.00	10.0	7.20
N392	034	001	1974	7.3	8.0	2.69	10.0	7.20
N392	034	037	1974	8.8	9.5	0.70	8.5	6.13
N392	034	052	1974	13.9	15.1	0.00	10.1	6.51
N392	034	052	1974	9.3	10.1	1.40	10.1	6.51

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	034	034	1974	8.3	9.2	0.70	7.5	5.70
N392	034	034	1974	5.9	6.5	2.10	7.5	5.70
N392	034	058	1974	6.9	7.6	2.70	11.6	5.82
N392	034	058	1974	4.8	5.6	3.57	11.6	5.82
N392	011	001	1978	16.5	17.1	4.75	22.0	14.58
N392	011	001	1978	4.2	4.4	12.94	22.0	14.58
N392	011	007	1978	19.9	22.7	0.00	20.1	12.22
N392	011	007	1978	12.3	12.7	4.72	20.1	12.22
N392	011	035	1978	20.5	22.5	0.70	19.7	13.62
N392	011	035	1978	12.3	12.7	5.99	19.7	13.62
N392	011	042	1978	7.7	7.9	6.75	13.9	11.16
N392	011	042	1978	5.8	6.0	8.16	13.9	11.16
N392	011	051	1978	7.6	7.8	7.39	13.7	13.11
N392	011	051	1978	5.5	5.7	9.52	13.7	13.11
N392	012	015	1978	8.9	9.1	6.14	13.3	12.70
N392	012	015	1978	6.3	6.5	8.92	13.3	12.70
N392	012	029	1978	25.2	28.2	0.00	22.8	14.48
N392	012	029	1978	15.0	15.4	5.16	22.8	14.48
N392	012	041	1978	10.6	11.0	7.73	20.7	14.02
N392	012	041	1978	8.1	8.5	8.84	20.7	14.02
N392	012	043	1978	15.9	17.5	0.70	16.2	11.21
N392	012	051	1978	18.2	20.0	1.40	20.0	12.69
N392	012	051	1978	9.5	9.9	6.42	20.0	12.69
N392	013	003	1978	19.6	21.2	0.70	19.4	14.48
N392	013	003	1978	13.7	14.1	5.24	19.4	14.48
N392	013	012	1978	20.7	24.0	0.00	19.4	13.62
N392	013	012	1978	15.9	16.9	2.52	19.4	13.62
N392	013	026	1978	9.9	10.1	6.14	14.1	12.06
N392	013	026	1978	6.0	6.2	9.38	14.1	12.06
N392	013	027	1978	10.6	10.8	4.79	13.7	13.29
N392	013	027	1978	6.7	6.9	8.68	13.7	13.29
N392	013	036	1978	15.5	16.1	3.32	19.0	14.98
N392	013	036	1978	8.8	9.0	8.24	19.0	14.98
N392	014	008	1978	11.2	11.5	3.41	13.5	13.17
N392	014	008	1978	8.5	8.7	6.55	13.5	13.17
N392	014	019	1978	15.8	17.0	0.00	15.8	12.13
N392	014	035	1978	18.4	19.8	1.40	19.8	15.27
N392	014	035	1978	14.2	14.6	5.66	19.8	15.27
N392	014	046	1978	19.4	20.3	2.96	22.6	13.79
N392	014	046	1978	7.2	7.4	10.23	22.6	13.79
N392	014	048	1978	26.4	28.9	0.00	22.1	14.95
N392	014	048	1978	6.9	7.1	11.02	22.1	14.95
N392	021	014	1978	24.5	28.1	0.00	24.1	13.91
N392	021	014	1978	15.7	16.5	5.11	24.1	13.91
N392	021	027	1978	21.9	23.5	0.70	22.8	13.04
N392	021	027	1978	10.1	10.5	7.92	22.8	13.04
N392	021	034	1978	21.0	22.5	1.40	22.5	14.53
N392	021	034	1978	7.5	7.7	9.82	22.5	14.53
N392	021	053	1978	11.9	12.3	2.29	13.3	14.33
N392	021	053	1978	11.0	11.2	4.35	13.3	14.33
N392	021	060	1978	14.8	17.2	0.00	14.6	11.64
N392	021	060	1978	12.3	12.7	3.36	14.6	11.64

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	022	007	1978	18.5	19.7	2.37	21.8	16.98
N392	022	007	1978	14.0	14.4	6.66	21.8	16.98
N392	022	015	1978	6.9	7.1	7.91	12.1	12.56
N392	022	015	1978	4.8	5.0	10.32	12.1	12.56
N392	022	020	1978	10.1	10.3	5.42	15.0	14.07
N392	022	045	1978	8.8	9.2	11.23	21.8	17.02
N392	022	045	1978	5.9	6.1	13.19	21.8	17.02
N392	022	052	1978	11.9	12.3	8.22	22.2	14.26
N392	022	052	1978	7.4	7.6	11.45	22.2	14.26
N392	023	010	1978	23.3	25.3	0.70	24.2	15.56
N392	023	010	1978	19.3	20.4	2.42	24.2	15.56
N392	023	013	1978	17.2	20.0	0.00	16.4	14.58
N392	023	023	1978	27.1	30.2	0.00	26.0	16.02
N392	023	032	1978	24.8	26.8	0.70	24.9	15.14
N392	023	058	1978	11.7	12.1	3.06	14.1	11.54
N392	023	058	1978	6.8	7.0	7.41	14.1	11.54
N392	024	009	1978	7.7	7.9	10.23	20.1	14.77
N392	024	009	1978	4.9	5.1	12.62	20.1	14.77
N392	024	019	1978	19.4	21.1	1.40	21.1	13.62
N392	024	019	1978	17.8	19.0	2.32	21.1	13.62
N392	024	026	1978	11.3	12.9	1.40	12.9	11.42
N392	024	026	1978	7.9	8.1	5.78	12.9	11.42
N392	024	035	1978	17.5	18.3	2.32	20.7	15.09
N392	024	035	1978	12.8	13.2	7.31	20.7	15.09
N392	024	052	1978	12.0	13.0	0.00	12.4	12.28
N392	024	052	1978	9.3	9.5	4.93	12.4	12.28
N392	031	015	1978	22.7	26.9	0.00	21.7	13.18
N392	031	015	1978	10.8	11.2	6.65	21.7	13.18
N392	031	016	1978	9.2	9.4	8.35	21.9	15.02
N392	031	016	1978	6.5	6.7	10.88	21.9	15.02
N392	031	033	1978	11.1	11.5	3.08	13.6	11.54
N392	031	033	1978	7.1	7.3	7.62	13.6	11.54
N392	031	040	1978	5.4	5.6	10.42	15.9	13.06
N392	031	041	1978	20.1	21.6	0.70	21.0	14.61
N392	031	041	1978	18.5	19.3	2.84	21.0	14.61
N392	032	010	1978	19.2	21.6	0.70	20.0	13.58
N392	032	010	1978	12.4	12.8	5.49	20.0	13.58
N392	032	023	1978	13.3	14.8	0.70	13.8	13.16
N392	032	023	1978	11.0	11.4	3.13	13.8	13.16
N392	032	044	1978	20.3	23.4	0.00	20.2	12.26
N392	032	044	1978	16.7	17.5	2.58	20.2	12.26
N392	032	057	1978	16.6	17.4	3.10	20.1	15.08
N392	032	057	1978	12.3	12.7	6.63	20.1	15.08
N392	032	060	1978	13.7	15.3	0.70	14.5	14.48
N392	032	060	1978	7.4	7.6	9.18	14.5	14.48
N392	033	002	1978	10.3	10.5	2.56	11.3	12.22
N392	033	002	1978	7.8	8.0	5.91	11.3	12.22
N392	033	007	1978	16.2	17.4	1.40	17.4	13.26
N392	033	007	1978	11.6	12.1	4.52	17.4	13.26
N392	033	024	1978	17.0	19.0	0.00	17.0	13.46
N392	033	024	1978	13.2	14.0	3.21	17.0	13.46
N392	033	038	1978	17.4	18.8	1.40	18.8	14.56

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	033	038	1978	13.3	13.8	5.18	18.8	14.56
N392	033	057	1978	6.3	6.5	6.33	11.4	11.09
N392	033	057	1978	5.3	5.5	7.40	11.4	11.09
N392	034	012	1978	22.9	24.9	0.70	22.4	14.49
N392	034	012	1978	7.6	7.8	10.04	22.4	14.49
N392	034	035	1978	22.1	24.1	1.40	24.1	15.03
N392	034	035	1978	6.3	6.5	11.20	24.1	15.03
N392	034	045	1978	7.3	7.5	8.47	15.0	13.26
N392	034	051	1978	26.6	28.9	0.00	24.3	15.16
N392	034	051	1978	24.6	26.6	0.70	24.3	15.16
N392	034	055	1978	8.3	8.5	5.66	15.8	11.67
N392	011	002	1982	30.7	35.1	0.70	32.5	19.20
N392	011	002	1982	7.8	8.1	16.23	32.5	19.20
N392	011	016	1982	19.4	22.3	0.70	20.8	16.20
N392	011	016	1982	18.8	20.8	1.40	20.8	16.20
N392	011	021	1982	18.4	21.6	0.70	19.9	15.20
N392	011	021	1982	17.7	19.9	1.40	19.9	15.20
N392	011	022	1982	21.2	24.7	0.00	20.5	15.92
N392	011	024	1982	30.2	36.5	0.00	30.5	18.90
N392	011	053	1982	27.9	31.7	1.40	31.7	21.30
N392	012	012	1982	8.9	9.1	14.17	27.8	17.67
N392	012	019	1982	31.7	36.2	0.70	34.1	17.60
N392	012	019	1982	9.3	9.5	13.89	34.1	17.60
N392	012	020	1982	18.3	19.3	7.55	34.7	18.57
N392	012	020	1982	9.3	9.6	13.37	34.7	18.57
N392	012	030	1982	20.4	22.0	4.35	27.2	16.00
N392	012	049	1982	29.3	33.5	0.70	31.4	20.50
N392	012	049	1982	8.7	8.9	16.00	31.4	20.50
N392	012	054	1982	11.6	12.3	10.75	27.0	17.50
N392	013	011	1982	21.1	22.3	3.22	24.5	17.29
N392	013	011	1982	9.6	9.8	13.09	24.5	17.29
N392	013	020	1982	22.5	24.0	4.93	29.7	20.14
N392	013	035	1982	13.4	13.7	13.90	29.5	20.90
N392	013	041	1982	21.4	24.0	1.40	24.0	18.95
N392	013	041	1982	13.6	14.2	9.92	24.0	18.95
N392	013	043	1982	16.0	16.4	9.40	23.5	20.50
N392	013	045	1982	25.7	28.7	1.40	28.7	18.55
N392	014	011	1982	26.7	30.1	0.70	26.7	19.70
N392	014	014	1982	16.4	17.2	7.51	24.5	17.70
N392	014	014	1982	9.2	9.6	13.90	24.5	17.70
N392	014	016	1982	23.9	28.2	0.00	24.2	18.05
N392	014	016	1982	18.7	22.0	2.59	24.2	18.05
N392	014	024	1982	33.1	38.4	0.00	32.6	25.20
N392	014	024	1982	16.8	17.3	13.30	32.6	25.20
N392	014	034	1982	25.5	28.0	3.78	32.2	23.50
N392	014	034	1982	8.1	8.3	17.50	32.2	23.50
N392	014	051	1982	28.3	31.5	1.40	31.5	17.50
N392	014	051	1982	24.4	26.3	3.61	31.5	17.50
N392	021	010	1982	31.4	33.6	3.31	37.2	20.50
N392	021	010	1982	11.8	12.3	14.13	37.2	20.50
N392	021	024	1982	11.7	12.1	14.28	27.4	20.75
N392	021	043	1982	34.0	37.7	1.40	37.7	22.10

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	021	043	1982	16.9	17.3	11.40	37.7	22.10
N392	021	056	1982	17.7	18.3	7.05	22.8	18.64
N392	022	027	1982	11.0	11.4	14.81	26.5	19.85
N392	022	031	1982	34.1	38.8	0.70	36.7	24.60
N392	022	031	1982	33.3	36.7	1.40	36.7	24.60
N392	022	034	1982	16.3	16.8	10.32	26.3	22.90
N392	022	039	1982	8.2	8.4	17.43	26.2	21.43
N392	022	047	1982	34.4	39.9	0.00	34.1	23.00
N392	022	047	1982	30.8	34.1	1.40	34.1	23.00
N392	022	060	1982	15.2	15.6	14.41	35.6	22.50
N392	022	060	1982	10.0	10.4	16.89	35.6	22.50
N392	023	015	1982	34.2	40.2	0.00	37.2	20.24
N392	023	015	1982	16.2	17.2	12.30	37.2	20.24
N392	023	018	1982	36.5	39.9	0.00	34.7	22.75
N392	023	018	1982	23.6	24.5	8.80	34.7	22.75
N392	023	024	1982	35.2	38.8	0.00	35.8	23.90
N392	023	024	1982	24.3	25.0	8.23	35.8	23.90
N392	023	042	1982	14.0	14.4	11.81	29.6	20.40
N392	023	057	1982	25.4	28.0	1.40	28.0	18.70
N392	024	002	1982	20.0	22.8	1.40	22.8	19.20
N392	024	002	1982	15.9	16.1	8.55	22.8	19.20
N392	024	011	1982	20.9	21.7	7.72	31.7	19.90
N392	024	016	1982	9.6	10.0	14.05	25.0	20.60
N392	024	021	1982	17.5	18.3	4.75	23.8	18.50
N392	024	021	1982	16.0	16.3	6.85	23.8	18.50
N392	024	029	1982	30.5	35.5	0.70	33.3	21.80
N392	024	029	1982	10.0	10.2	16.34	33.3	21.80
N392	024	047	1982	30.1	33.0	0.70	31.5	20.92
N392	031	010	1982	32.3	35.9	0.00	32.1	20.30
N392	031	010	1982	8.0	8.2	15.35	32.1	20.30
N392	031	012	1982	31.4	35.3	0.70	33.6	23.16
N392	031	012	1982	13.0	13.6	15.01	33.6	23.16
N392	031	031	1982	15.8	16.3	9.59	26.8	19.30
N392	031	036	1982	14.8	15.2	9.87	25.2	20.40
N392	031	050	1982	35.4	39.6	0.00	33.6	21.40
N392	031	050	1982	33.0	36.6	0.70	33.6	21.40
N392	031	059	1982	24.8	28.8	0.70	26.2	21.00
N392	032	015	1982	20.8	21.6	7.79	31.7	20.50
N392	032	015	1982	6.5	6.7	17.56	31.7	20.50
N392	032	025	1982	22.6	23.6	8.43	34.0	21.70
N392	032	025	1982	13.7	14.0	14.86	34.0	21.70
N392	032	029	1982	24.5	28.1	0.00	25.5	18.60
N392	032	039	1982	20.3	23.2	1.40	23.2	16.82
N392	032	039	1982	10.6	11.0	10.75	23.2	16.82
N392	032	045	1982	23.6	25.9	1.40	25.9	17.86
N392	032	054	1982	30.5	33.4	1.40	33.4	21.60
N392	032	054	1982	23.0	23.6	7.45	33.4	21.60
N392	033	011	1982	25.1	28.1	1.40	28.1	22.80
N392	033	026	1982	9.8	10.0	16.73	28.0	20.85
N392	033	027	1982	20.1	23.7	0.70	22.1	18.00
N392	033	027	1982	19.3	22.1	1.40	22.1	18.00
N392	033	031	1982	20.4	22.3	1.40	22.3	15.76

Appendix 12. Sectional measurement data for Pigeon Valley.
(cont.)   (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N392	033	031	1982	16.9	17.3	5.25	22.3	15.76
N392	033	044	1982	8.4	8.8	11.05	19.4	15.00
N392	033	050	1982	31.3	38.3	0.00	28.7	18.00
N392	034	010	1982	23.4	26.7	0.70	25.7	19.20
N392	034	033	1982	36.4	39.8	0.00	34.4	22.50
N392	034	033	1982	31.6	34.4	1.40	34.4	22.50
N392	034	041	1982	31.2	36.1	0.00	30.1	18.79
N392	034	041	1982	24.3	25.9	3.89	30.1	18.79
N392	034	046	1982	19.2	19.6	7.43	29.6	19.80
N392	034	046	1982	13.7	14.1	12.16	29.6	19.80
N392	034	050	1982	32.9	37.3	0.70	34.6	21.50
N392	034	050	1982	31.6	34.6	1.40	34.6	21.50
N392	034	052	1982	34.5	38.6	0.70	36.8	20.60
N392	034	052	1982	15.0	15.5	12.10	36.8	20.60

Appendix 13. Summary of sectionally measured trees for Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N238	001	004	1973	28.4	23.95	0.4998128	0.6457859
N238	001	020	1973	48.0	35.75	2.1316338	2.4919720
N238	001	024	1973	43.7	31.66	1.6435912	1.9429133
N238	001	025	1973	26.7	28.64	0.5345998	0.6590060
N238	001	027	1973	44.2	34.22	1.6768396	2.0039206
N238	002	002	1973	39.1	33.18	1.2502797	1.5108297
N238	002	004	1973	24.6	25.32	0.3499454	0.4593716
N238	002	032	1973	47.8	32.42	1.6662946	2.0677691
N238	002	033	1973	50.8	34.80	2.1812301	2.6842809
N238	002	034	1973	31.7	31.51	0.7914095	0.9468925
N238	003	002	1973	28.4	28.40	0.6033223	0.7399199
N23C	003	014	1973	47.5	34.58	1.8299294	2.2673049
N238	003	022	1973	32.0	27.82	0.7560549	0.9443985
N238	003	024	1973	46.7	33.00	1.7834108	2.1066871
N238	003	032	1973	49.5	35.13	2.2915096	2.7060738
N238	004	005	1973	28.2	28.82	0.5424471	0.6703582
N238	004	013	1973	26.7	28.34	0.4518909	0.5765437
N238	004	019	1973	42.2	32.30	1.3147371	1.6586211
N238	004	027	1973	41.1	36.38	1.3187275	1.6491158
N238	004	030	1973	39.1	33.58	1.2470689	1.5071156
N238	005	004	1973	24.4	23.73	0.3474059	0.4376876
N238	005	013	1973	36.8	28.73	0.9426327	1.1923466
N238	005	015	1973	23.4	22.64	0.3073984	0.3979788
N238	005	021	1973	35.8	26.66	0.8398799	1.0802734
N238	006	020	1973	22.1	26.14	0.3192976	0.4143651
N238	006	024	1973	38.6	30.32	1.1920724	1.4048505
N238	006	033	1973	43.4	34.43	1.4438844	1.7908843
N238	006	039	1973	41.1	34.52	1.3480859	1.7381177
N238	006	050	1973	23.9	25.41	0.3570980	0.4468679
N239	001	006	1973	10.2	11.22	0.0373663	0.0470360
N239	001	013	1973	14.7	11.88	0.0715215	0.0879621
N239	001	019	1973	9.1	12.25	0.0363107	0.0449428
N239	001	021	1973	19.3	16.63	0.1651356	0.2028249
N239	001	025	1973	15.0	13.77	0.0899979	0.1150964
N239	001	041	1973	21.3	17.00	0.1986389	0.2466758
N239	001	043	1973	11.4	12.61	0.0493588	0.0592793
N239	001	048	1973	18.5	14.80	0.1421685	0.1788333
N239	001	052	1973	20.8	15.84	0.1935104	0.2395972
N239	002	001	1973	18.5	13.55	0.1361372	0.1690632
N239	002	009	1973	9.9	13.07	0.0476711	0.0576620
N239	002	022	1973	9.4	10.93	0.0341598	0.0423737
N239	002	024	1973	16.8	14.01	0.1098760	0.1342018
N239	002	025	1973	13.2	13.61	0.0803922	0.0960982
N239	002	033	1973	16.8	13.19	0.0899124	0.1224925
N239	002	046	1973	20.6	13.65	0.1235542	0.1721632
N239	002	049	1973	8.6	9.44	0.0224847	0.0277239
N239	002	058	1973	12.7	13.25	0.0754397	0.0918439
N239	003	012	1973	8.6	10.35	0.0279010	0.0359240
N239	003	016	1973	18.0	12.40	0.1096959	0.1331263
N239	003	020	1973	19.8	14.89	0.1418198	0.1822175
N239	003	022	1973	14.5	12.64	0.0742529	0.0978100
N239	003	029	1973	11.9	12.58	0.0613402	0.0758010
N239	003	031	1973	7.9	10.35	0.0229971	0.0294707

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N239	003	038	1973	21.6	16.45	0.1719323	0.2291573
N239	003	044	1973	21.1	14.93	0.1609038	0.1988711
N239	003	046	1973	7.1	8.77	0.0171015	0.0201777
N239	004	008	1973	23.1	16.36	0.2130475	0.2687269
N239	004	011	1973	9.4	11.85	0.0349193	0.0427699
N239	004	022	1973	14.7	12.30	0.0782992	0.0972197
N239	004	024	1973	9.1	10.00	0.0306392	0.0369613
N239	004	026	1973	17.5	14.41	0.1297311	0.1567883
N239	004	032	1973	14.2	12.76	0.0747648	0.0942178
N239	004	042	1973	8.9	10.38	0.0269091	0.0347261
N239	004	048	1973	16.5	15.35	0.1275813	0.1582593
N239	004	059	1973	16.8	13.65	0.1132287	0.1446460
N239	005	001	1973	15.7	15.23	0.1251023	0.1498758
N239	005	013	1973	9.7	11.51	0.0340854	0.0415391
N239	005	025	1973	18.8	14.75	0.1240391	0.1656434
N239	005	029	1973	13.5	13.10	0.0757944	0.0954324
N239	005	032	1973	17.0	14.32	0.1104522	0.1407172
N239	005	036	1973	9.4	13.16	0.0410872	0.0508654
N239	005	043	1973	12.7	14.04	0.0677511	0.0854734
N239	005	053	1973	8.4	10.87	0.0281582	0.0353623
N239	005	054	1973	17.8	13.07	0.1135112	0.1425913
N239	006	002	1973	10.2	12.55	0.0373617	0.0498755
N239	006	006	1973	12.2	12.46	0.0564822	0.0710081
N239	006	017	1973	16.0	15.20	0.1052030	0.1329917
N239	006	032	1973	14.5	13.19	0.0789332	0.1017888
N239	006	040	1973	8.6	10.93	0.0269950	0.0342050
N239	006	047	1973	16.5	13.75	0.1010154	0.1277373
N239	006	050	1973	10.4	9.07	0.0329372	0.0411520
N239	006	056	1973	17.3	14.38	0.1169282	0.1480769
N239	006	059	1973	21.6	15.08	0.1680557	0.2146089
N239	001	008	1978	24.8	16.30	0.2867591	0.3186060
N239	001	037	1978	23.5	17.46	0.2942472	0.3446797
N239	001	050	1978	30.5	20.23	0.5207601	0.5884625
N239	001	059	1978	31.1	14.75	0.4378623	0.5192876
N239	001	999	1978	29.0	20.67	0.4741932	0.5476879
N239	002	003	1978	20.4	16.35	0.2154754	0.2404232
N239	002	017	1978	28.6	19.61	0.4819212	0.5458331
N239	002	050	1978	27.8	19.03	0.4022799	0.4719430
N239	002	053	1978	28.9	16.82	0.3730209	0.4487787
N239	002	999	1978	21.2	19.06	0.2618012	0.3101335
N239	003	003	1978	19.2	15.81	0.1821980	0.2138316
N239	003	030	1978	22.5	21.78	0.3313718	0.3797915
N239	003	040	1978	18.6	16.02	0.1563240	0.1860828
N239	003	043	1978	23.6	17.51	0.2591059	0.3028114
N239	003	057	1978	22.4	16.52	0.2432067	0.2907407
N239	004	005	1978	28.7	21.67	0.4434671	0.5375874
N239	004	020	1978	29.3	22.18	0.5537590	0.6217489
N239	004	025	1978	21.1	17.54	0.2365262	0.2838498
N239	004	027	1978	26.4	21.26	0.4249029	0.4734638
N239	004	033	1978	20.4	17.66	0.2080543	0.2464893
N239	005	006	1978	16.1	15.33	0.1324745	0.1497647
N239	005	018	1978	18.0	17.53	0.1625017	0.1857334
N239	005	023	1978	23.5	19.46	0.3049231	0.3439726

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N239	005	031	1978	23.8	18.03	0.3138065	0.3482870
N239	005	035	1978	23.1	18.92	0.2731562	0.3321769
N239	006	014	1978	15.5	15.43	0.1108281	0.1274212
N239	006	018	1978	20.4	18.36	0.2271221	0.2632497
N239	006	042	1978	15.3	14.79	0.1102146	0.1258445
N239	006	999	1978	20.4	18.51	0.2078076	0.2444573
N239	006	999	1978	21.6	19.97	0.2506441	0.2924935
N239	001	004	1982	34.3	23.50	0.6500479	0.7717526
N239	001	012	1982	36.0	22.70	0.7067595	0.8320453
N239	001	031	1982	34.7	24.29	0.8597983	0.9675113
N239	001	035	1982	39.3	24.87	0.9867815	1.1387110
N239	002	006	1982	29.0	19.73	0.5130303	0.5812478
N239	002	015	1982	39.0	22.47	0.9860072	1.1238568
N239	002	042	1982	28.9	21.80	0.4455690	0.5629672
N239	002	053	1982	37.7	20.13	0.7710984	0.9474713
N239	003	023	1982	28.4	22.81	0.5391847	0.6126565
N239	003	030	1982	29.2	23.20	0.5351799	0.6333505
N239	003	003	1982	22.8	15.20	0.2478866	0.3007765
N239	003	014	1982	25.0	18.10	0.3037962	0.3694367
N239	004	003	1982	29.3	23.60	0.6145214	0.6838545
N239	004	020	1982	38.7	25.58	1.0980158	1.2356918
N239	004	046	1982	32.6	21.10	0.6091166	0.7065849
N239	004	056	1982	29.8	23.80	0.6163255	0.6905017
N239	005	006	1982	21.3	18.67	0.2696791	0.3069344
N239	005	012	1982	31.5	25.54	0.7380128	0.8212389
N239	005	031	1982	31.1	24.62	0.6281294	0.7109146
N239	005	057	1982	24.0	19.55	0.3417289	0.3915931
N239	006	027	1982	23.0	17.48	0.2638391	0.3267537
N239	006	031	1982	25.7	20.55	0.3666213	0.4360762
N239	006	041	1982	23.1	19.20	0.3047391	0.3568520
N239	006	048	1982	25.5	22.45	0.3894266	0.4548380
N392	011	001	1974	12.8	7.99	0.0466283	0.0547945
N392	011	002	1974	11.0	7.24	0.0309510	0.0369786
N392	011	016	1974	6.5	4.38	0.0076707	0.0089660
N392	011	017	1974	7.1	5.07	0.0100078	0.0117444
N392	011	034	1974	7.4	5.48	0.0112148	0.0128430
N392	011	059	1974	10.5	7.01	0.0305898	0.0352068
N392	012	003	1974	9.5	6.09	0.0192502	0.0221032
N392	012	032	1974	10.5	6.74	0.0276975	0.0330433
N392	012	046	1974	10.8	7.61	0.0282057	0.0342865
N392	012	047	1974	5.8	4.59	0.0063072	0.0073644
N392	012	053	1974	6.2	4.99	0.0078282	0.0090834
N392	012	055	1974	6.5	4.78	0.0072801	0.0083533
N392	013	006	1974	5.9	4.72	0.0075696	0.0090689
N392	013	011	1974	6.8	5.42	0.0105476	0.0124519
N392	013	012	1974	11.6	8.14	0.0335247	0.0410905
N392	013	021	1974	7.0	5.34	0.0113931	0.0133061
N392	013	035	1974	11.2	6.74	0.0335802	0.0402322
N392	013	036	1974	10.2	7.11	0.0290239	0.0351567
N392	014	036	1974	6.1	5.04	0.0073773	0.0090468
N392	014	044	1974	11.5	7.81	0.0329268	0.0395715
N392	014	046	1974	11.7	6.87	0.0347478	0.0414799
N392	014	049	1974	6.7	5.54	0.0090848	0.0112103

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N392	014	054	1974	13.0	7.46	0.0379715	0.0452126
N392	014	060	1974	7.8	5.43	0.0124163	0.0152206
N392	021	010	1974	12.5	6.67	0.0331594	0.0405191
N392	021	014	1974	11.2	6.73	0.0278743	0.0348288
N392	021	016	1974	6.6	5.09	0.0083620	0.0100081
N392	021	018	1974	8.6	5.71	0.0144189	0.0179160
N392	021	019	1974	12.7	7.51	0.0370559	0.0452133
N392	021	020	1974	7.1	4.49	0.0090204	0.0111875
N392	022	001	1974	12.2	8.23	0.0425036	0.0520601
N392	022	037	1974	7.5	5.74	0.0130647	0.0149452
N392	022	050	1974	9.1	6.82	0.0207383	0.0239065
N392	022	054	1974	8.6	6.71	0.0173977	0.0205954
N392	022	055	1974	12.5	7.82	0.0463920	0.0536830
N392	022	060	1974	14.2	7.79	0.0599091	0.0704092
N392	023	005	1974	6.8	4.75	0.0087713	0.0107584
N392	023	038	1974	9.4	6.37	0.0192516	0.0227839
N392	023	040	1974	14.1	7.09	0.0458190	0.0541150
N392	023	046	1974	12.7	7.80	0.0411995	0.0485653
N392	023	054	1974	12.0	8.71	0.0442644	0.0527115
N392	023	058	1974	7.1	5.02	0.0105767	0.0130552
N392	024	003	1974	10.2	7.74	0.0280390	0.0329502
N392	024	008	1974	8.4	5.15	0.0138909	0.0166854
N392	024	009	1974	11.4	7.92	0.0378397	0.0455174
N392	024	010	1974	11.6	7.56	0.0320833	0.0387556
N392	024	021	1974	9.3	5.30	0.0176995	0.0210724
N392	024	034	1974	8.2	5.31	0.0129047	0.0161678
N392	031	004	1974	8.2	5.98	0.0129672	0.0152969
N392	031	008	1974	13.4	6.98	0.0438568	0.0538142
N392	031	010	1974	14.1	6.91	0.0478528	0.0564010
N392	031	012	1974	13.6	7.84	0.0540063	0.0648787
N392	031	059	1974	8.0	5.67	0.0143409	0.0179764
N392	031	060	1974	8.9	5.41	0.0174920	0.0214734
N392	032	007	1974	11.6	6.65	0.0313077	0.0366291
N392	032	009	1974	6.9	5.50	0.0110100	0.0129561
N392	032	017	1974	7.2	4.71	0.0121172	0.0142524
N392	032	019	1974	10.0	6.90	0.0219097	0.0257852
N392	032	023	1974	6.5	5.46	0.0097048	0.0114752
N392	032	025	1974	11.2	6.62	0.0275913	0.0336592
N392	033	001	1974	10.5	7.42	0.0319834	0.0375677
N392	033	002	1974	6.2	5.60	0.0083712	0.0104246
N392	033	003	1974	6.7	5.71	0.0097973	0.0119584
N392	033	004	1974	6.4	4.96	0.0089087	0.0107655
N392	033	009	1974	9.0	6.02	0.0201223	0.0240871
N392	033	055	1974	12.5	7.68	0.0372147	0.0451511
N392	034	001	1974	10.0	7.20	0.0236744	0.0284266
N392	034	037	1974	8.5	6.13	0.0157740	0.0187184
N392	034	052	1974	10.1	6.51	0.0283665	0.0337823
N392	034	034	1974	7.5	5.70	0.0129999	0.0160304
N392	034	058	1974	11.6	5.82	0.0236954	0.0284990
N392	011	001	1978	22.0	14.58	0.2217029	0.2454751
N392	011	007	1978	20.1	12.22	0.1339075	0.1568597
N392	011	035	1978	19.7	13.62	0.1645257	0.1868185
N392	011	042	1978	13.9	11.16	0.0716046	0.0849577

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N392	011	051	1978	13.7	13.11	0.0771781	0.0866296
N392	012	015	1978	13.3	12.70	0.0801981	0.0864856
N392	012	029	1978	22.8	14.48	0.2155196	0.2407793
N392	012	041	1978	20.7	14.02	0.1807336	0.2045607
N392	012	043	1978	16.2	11.21	0.1060465	0.1194492
N392	012	051	1978	20.0	12.69	0.1404742	0.1622263
N392	013	003	1978	19.4	14.48	0.1767975	0.1974075
N392	013	012	1978	19.4	13.62	0.1480491	0.1696690
N392	013	026	1978	14.1	12.06	0.0901050	0.0999769
N392	013	027	1978	13.7	13.29	0.0914626	0.0995304
N392	013	036	1978	19.0	14.98	0.1544773	0.1697555
N392	014	008	1978	13.5	13.17	0.0823711	0.0900127
N392	014	019	1978	15.8	12.13	0.0988208	0.1101337
N392	014	035	1978	19.8	15.27	0.1920513	0.2129126
N392	014	046	1978	22.6	13.79	0.2160456	0.2410201
N392	014	048	1978	22.1	14.95	0.2125562	0.2456837
N392	021	014	1978	24.1	13.91	0.2269297	0.2646101
N392	021	027	1978	22.8	13.04	0.1926660	0.2122584
N392	021	034	1978	22.5	14.53	0.2054818	0.2261780
N392	021	053	1978	13.3	14.33	0.0893860	0.0971991
N392	021	060	1978	14.6	11.64	0.0904639	0.1002702
N392	022	007	1978	21.8	16.98	0.2272915	0.2534543
N392	022	015	1978	12.1	12.56	0.0705230	0.0773893
N392	022	020	1978	15.0	14.07	0.1009241	0.1099219
N392	022	045	1978	21.8	17.02	0.2162163	0.2473645
N392	022	052	1978	22.2	14.26	0.2367071	0.2641788
N392	023	010	1978	24.2	15.56	0.2480817	0.2739695
N392	023	013	1978	16.4	14.58	0.1169318	0.1327361
N392	023	023	1978	26.0	16.02	0.2848318	0.3197706
N392	023	032	1978	24.9	15.14	0.2451163	0.2701533
N392	023	058	1978	14.1	11.54	0.0795469	0.0873809
N392	024	009	1978	20.1	14.77	0.1808051	0.2061357
N392	024	019	1978	21.1	13.62	0.1723389	0.1945069
N392	024	026	1978	12.9	11.42	0.0590231	0.0700302
N392	024	035	1978	20.7	15.09	0.1955499	0.2170301
N392	024	052	1978	12.4	12.28	0.0665100	0.0722575
N392	031	015	1978	21.7	13.18	0.1748393	0.2069156
N392	031	016	1978	21.9	15.02	0.2012644	0.2241045
N392	031	033	1978	13.6	11.54	0.0784447	0.0883781
N392	031	040	1978	15.9	13.06	0.1085358	0.1193289
N392	031	041	1978	21.0	14.61	0.1986719	0.2179219
N392	032	010	1978	20.0	13.58	0.1527764	0.1754237
N392	032	023	1978	13.8	13.16	0.0795463	0.0882015
N392	032	044	1978	20.2	12.26	0.1399871	0.1610693
N392	032	057	1978	20.1	15.08	0.1868838	0.2102521
N392	032	060	1978	14.5	14.48	0.0916003	0.1015051
N392	033	002	1978	11.3	12.22	0.0602929	0.0635445
N392	033	007	1978	17.4	13.26	0.1091303	0.1230715
N392	033	024	1978	17.0	13.46	0.1186220	0.1340091
N392	033	038	1978	18.8	14.56	0.1587261	0.1766476
N392	033	057	1978	11.4	11.09	0.0521234	0.0568719
N392	034	012	1978	22.4	14.49	0.2167230	0.2426406
N392	034	035	1978	24.1	15.03	0.2339420	0.2681884

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N392	034	045	1978	15.0	13.26	0.0903195	0.1025342
N392	034	051	1978	24.3	15.16	0.2431055	0.2690067
N392	034	055	1978	15.8	11.67	0.0858892	0.0930136
N392	011	002	1982	32.5	19.20	0.5618490	0.6657231
N392	011	016	1982	20.8	16.20	0.2529408	0.2846133
N392	011	021	1982	19.9	15.20	0.2022356	0.2321170
N392	011	022	1982	20.5	15.92	0.2370173	0.2695132
N392	011	024	1982	30.5	18.90	0.5091496	0.6278157
N392	011	053	1982	31.7	21.30	0.5852764	0.6844819
N392	012	012	1982	27.8	17.67	0.3827429	0.4539571
N392	012	019	1982	34.1	17.60	0.5603271	0.6522964
N392	012	020	1982	34.7	18.57	0.5255536	0.6237073
N392	012	030	1982	27.2	16.00	0.3236270	0.3840793
N392	012	049	1982	31.4	20.50	0.5510538	0.6253368
N392	012	054	1982	27.0	17.50	0.3410258	0.4030184
N392	013	011	1982	24.5	17.29	0.3518271	0.3900511
N392	013	020	1982	29.7	20.14	0.4961553	0.5788608
N392	013	035	1982	29.5	20.90	0.5468743	0.6281967
N392	013	041	1982	24.0	18.95	0.3186150	0.3630634
N392	013	043	1982	23.5	20.50	0.3536302	0.3978726
N392	013	045	1982	28.7	18.55	0.4463536	0.5148720
N392	014	011	1982	26.7	19.70	0.4410830	0.4969535
N392	014	014	1982	24.5	17.70	0.3385280	0.3824703
N392	014	016	1982	24.2	18.05	0.2908720	0.3487414
N392	014	024	1982	32.6	25.20	0.6741408	0.7829399
N392	014	034	1982	32.2	23.50	0.5952562	0.7038713
N392	014	051	1982	31.5	17.50	0.4528055	0.5270053
N392	021	010	1982	37.2	20.50	0.7709979	0.8854462
N392	021	024	1982	27.4	20.75	0.4961862	0.5592780
N392	021	043	1982	37.7	22.10	0.8038999	0.9166237
N392	021	056	1982	22.8	18.64	0.3444258	0.3802051
N392	022	027	1982	26.5	19.85	0.4218311	0.4943650
N392	022	031	1982	36.7	24.60	0.8839883	1.0187416
N392	022	034	1982	26.3	22.90	0.4251572	0.4787084
N392	022	039	1982	26.2	21.43	0.4604419	0.5070001
N392	022	047	1982	34.1	23.00	0.7699027	0.8631600
N392	022	060	1982	35.6	22.50	0.8053322	0.8993515
N392	023	015	1982	37.2	20.24	0.7079717	0.8536905
N392	023	018	1982	34.7	22.75	0.8159330	0.9084398
N392	023	024	1982	35.8	23.90	0.8194083	0.9100200
N392	023	042	1982	29.6	20.40	0.4980830	0.5826893
N392	023	057	1982	28.0	18.70	0.3867280	0.4403402
N392	024	002	1982	22.8	19.20	0.3120728	0.3532892
N392	024	011	1982	31.7	19.90	0.5438119	0.6297972
N392	024	016	1982	25.0	20.60	0.3532476	0.3975722
N392	024	021	1982	23.8	18.50	0.2973055	0.3422651
N392	024	029	1982	33.3	21.80	0.5841568	0.6808287
N392	024	047	1982	31.5	20.92	0.6486923	0.7194276
N392	031	010	1982	32.1	20.30	0.5865293	0.6469637
N392	031	012	1982	33.6	23.16	0.6845753	0.7885518
N392	031	031	1982	26.8	19.30	0.4055412	0.4573947
N392	031	036	1982	25.2	20.40	0.3855450	0.4255742
N392	031	050	1982	33.6	21.40	0.6630540	0.7446176

Appendix 13. Summary of sectionally measured trees for
(cont.) Pigeon Valley.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N392	031	059	1982	26.2	21.00	0.4388500	0.5094370
N392	032	015	1982	31.7	20.50	0.5897230	0.6711693
N392	032	025	1982	34.0	21.70	0.7146825	0.8239690
N392	032	029	1982	25.5	18.60	0.3277802	0.3819325
N392	032	039	1982	23.2	16.82	0.2507133	0.2894325
N392	032	045	1982	25.9	17.86	0.3943546	0.4453919
N392	032	054	1982	33.4	21.60	0.6992879	0.7811034
N392	033	011	1982	28.1	22.80	0.5108361	0.5825039
N392	033	026	1982	28.0	20.85	0.4781775	0.5470921
N392	033	027	1982	22.1	18.00	0.2604623	0.3081418
N392	033	031	1982	22.3	15.76	0.2657480	0.2926615
N392	033	044	1982	19.4	15.00	0.1963360	0.2325132
N392	033	050	1982	28.7	18.00	0.3899389	0.4735399
N392	034	010	1982	25.7	19.20	0.3458018	0.4040111
N392	034	033	1982	34.4	22.50	0.7519078	0.8342335
N392	034	041	1982	30.1	18.79	0.5047836	0.5775253
N392	034	046	1982	29.6	19.80	0.4955565	0.5477531
N392	034	050	1982	34.6	21.50	0.6951951	0.7900064
N392	034	052	1982	36.8	20.60	0.6699628	0.7685441

Appendix 14. Stand volume data for Pigeon Valley.

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N238	001	1973	393.2	472.8	358.	37.7	27.1	33.1
N238	002	1973	430.5	528.8	507.	45.1	27.1	33.5
N238	003	1973	415.8	507.2	383.	40.9	27.1	33.6
N238	004	1973	501.1	624.5	519.	52.7	27.1	33.4
N238	005	1973	265.5	338.7	469.	32.7	27.1	27.7
N238	006	1973	500.0	623.8	643.	52.7	27.1	33.0
N239	001	1973	120.2	149.3	1483.	23.4	12.1	16.1
N239	002	1973	92.5	114.7	1483.	18.1	12.1	14.2
N239	003	1973	87.7	111.0	1433.	18.8	12.1	14.6
N239	004	1973	91.1	107.2	1483.	17.2	12.1	15.0
N239	005	1973	92.2	115.0	1483.	17.5	12.1	14.5
N239	006	1973	67.7	86.2	1483.	14.3	12.1	15.0
N239	001	1978	153.6	176.7	395.	23.4	17.0	18.5
N239	002	1978	127.8	148.4	395.	18.9	17.0	19.1
N239	003	1978	85.6	100.3	371.	13.1	17.0	18.7
N239	004	1978	137.8	160.0	395.	19.0	17.0	21.5
N239	005	1978	83.2	95.4	346.	12.3	17.0	20.1
N239	006	1978	70.0	81.2	420.	10.9	17.0	17.8
N239	001	1982	199.4	230.9	247.	25.5	21.0	24.2
N239	002	1982	180.0	213.3	272.	24.1	21.0	21.4
N239	003	1982	105.3	123.8	247.	14.0	21.0	24.0
N239	004	1982	185.5	209.4	247.	21.3	21.0	24.3
N239	005	1982	121.1	136.6	247.	14.4	21.0	24.5
N239	006	1982	82.7	98.2	247.	11.6	21.0	22.2
N392	011	1974	10.2	11.9	667.	3.5	6.0	7.2
N392	012	1974	8.1	9.5	667.	3.0	6.0	6.4
N392	013	1974	11.1	13.3	667.	3.5	6.0	6.6
N392	014	1974	10.2	12.4	667.	3.6	6.0	6.9
N392	021	1974	12.5	15.4	667.	4.7	6.0	7.1
N392	022	1974	24.0	28.3	667.	6.7	6.0	8.4
N392	023	1974	21.6	25.6	656.	6.8	6.0	8.4
N392	024	1974	15.1	18.1	667.	5.0	6.0	8.5
N392	031	1974	12.3	15.0	667.	4.3	6.0	6.9
N392	032	1974	10.4	12.3	667.	3.6	6.0	6.5
N392	033	1974	9.2	11.1	667.	3.0	6.0	7.0
N392	034	1974	13.3	16.0	656.	4.6	6.0	6.5
N392	011	1978	60.6	69.6	622.	12.2	10.0	13.4
N392	012	1978	70.4	79.0	556.	13.6	10.0	13.0
N392	013	1978	71.9	79.9	578.	12.7	10.0	14.6
N392	014	1978	74.5	83.3	522.	13.3	10.0	14.5
N392	021	1978	102.3	114.4	644.	19.9	10.0	13.8
N392	022	1978	114.8	128.4	656.	19.2	10.0	16.5
N392	023	1978	120.4	134.0	644.	22.8	10.0	16.1
N392	024	1978	87.4	98.6	667.	16.3	10.0	14.6
N392	031	1978	93.7	105.2	667.	17.6	10.0	14.6
N392	032	1978	91.0	103.2	667.	17.8	10.0	13.6
N392	033	1978	62.9	69.7	667.	11.9	10.0	14.0
N392	034	1978	106.6	119.5	622.	20.7	10.0	15.0
N392	011	1982	103.7	122.0	267.	14.7	14.0	19.5
N392	012	1982	106.6	124.9	256.	17.4	14.0	18.4
N392	013	1982	110.8	126.6	267.	14.9	14.0	19.7
N392	014	1982	124.0	143.9	267.	17.4	14.0	22.1
N392	021	1982	160.9	182.8	256.	21.5	14.0	21.4

Appendix 14. Stand volume data for Pigeon Valley. (cont.)

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N392	022	1982	167.9	189.9	267.	20.5	14.0	23.2
N392	023	1982	160.6	183.7	267.	21.8	14.0	22.1
N392	024	1982	115.2	131.2	267.	15.9	14.0	20.8
N392	031	1982	133.6	150.9	244.	17.7	14.0	21.5
N392	032	1982	130.5	148.9	278.	17.9	14.0	21.1
N392	033	1982	94.0	109.0	267.	13.2	14.0	20.3
N392	034	1982	150.7	170.7	267.	21.1	14.0	21.0

Appendix 15. Data for diameter distributions in Pigeon Valley.

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N238	001	1969	18.8	30.90	59.35	358.	28.5	23.0	25.56	269	112	9	23.0
N238	001	1970	19.8	32.38	66.36	358.	31.3	24.0	25.56	269	112	9	23.0
N238	001	1971	20.6	33.56	72.64	358.	33.7	25.2	25.56	269	112	9	23.0
N238	001	1972	20.8	34.51	76.94	358.	35.6	26.0	25.56	269	112	9	23.0
N238	001	1973	21.6	35.50	82.92	358.	37.7	27.1	25.56	269	112	9	23.0
N238	002	1969	8.4	28.47	89.39	507.	35.7	23.0	24.42	0	0	0	23.0
N238	002	1970	8.4	29.54	98.36	507.	38.6	24.0	24.42	0	0	0	23.0
N238	002	1971	8.4	30.47	105.61	507.	41.1	25.2	24.42	0	0	0	23.0
N238	002	1972	8.1	31.09	110.58	507.	42.8	26.0	24.42	0	0	0	23.0
N238	002	1973	8.4	31.92	116.37	507.	45.1	27.1	24.42	0	0	0	23.0
N238	003	1969	19.0	30.59	41.77	408.	31.3	23.0	24.89	269	112	9	23.0
N238	003	1970	19.0	31.75	47.33	408.	33.8	24.0	24.89	269	112	9	23.0
N238	003	1971	20.3	33.76	44.69	383.	35.6	25.2	24.89	269	112	9	23.0
N238	003	1972	20.8	34.73	48.50	383.	37.7	26.0	24.89	269	112	9	23.0
N238	003	1973	21.6	35.82	51.51	383.	40.1	27.1	24.89	269	112	9	23.0
N238	004	1969	5.1	28.42	178.22	532.	41.0	23.0	25.37	269	112	9	23.0
N238	004	1970	5.1	29.41	189.97	532.	43.9	24.0	25.37	269	112	9	23.0
N238	004	1971	5.3	30.98	203.54	519.	47.2	25.2	25.37	269	112	9	23.0
N238	004	1972	5.3	31.75	211.50	519.	49.5	26.0	25.37	269	112	9	23.0
N238	004	1973	5.3	32.69	223.73	519.	52.5	27.1	25.37	269	112	9	23.0
N238	005	1969	4.8	25.00	98.39	470.	26.6	23.0	20.08	0	0	0	23.0
N238	005	1970	5.1	25.73	103.08	470.	28.1	24.0	20.08	0	0	0	23.0
N238	005	1971	5.1	26.57	107.79	457.	29.1	25.2	20.08	0	0	0	23.0
N238	005	1972	5.3	27.26	111.07	457.	30.6	26.0	20.08	0	0	0	23.0
N238	005	1973	5.6	28.05	113.69	457.	32.2	27.1	20.08	0	0	0	23.0
N238	006	1969	15.2	28.22	35.52	655.	42.8	23.0	25.59	0	0	0	23.0
N238	006	1970	15.2	29.13	40.38	655.	45.7	24.0	25.59	0	0	0	23.0
N238	006	1971	15.2	30.03	45.19	643.	47.8	25.2	25.59	0	0	0	23.0
N238	006	1972	15.5	30.62	48.64	643.	49.7	26.0	25.59	0	0	0	23.0
N238	006	1973	15.5	31.29	52.13	643.	52.0	27.1	25.59	0	0	0	23.0
N239	001	1969	2.0	7.57	5.81	1481.	7.3	8.0	25.57	269	112	9	8.0
N239	001	1970	3.3	9.73	6.35	1481.	11.7	9.0	25.57	269	112	9	8.0
N239	001	1971	4.6	11.73	8.50	1481.	17.0	10.1	25.57	269	112	9	8.0
N239	001	1972	5.1	12.71	9.55	1481.	19.9	11.0	25.57	269	0	0	8.0
N239	001	1973	5.1	13.77	11.26	1481.	23.3	12.1	25.57	269	0	0	8.0
N239	001	1974	13.7	16.49	3.11	395.	8.5	13.0	25.57	269	0	0	13.0
N239	001	1975	16.0	19.30	4.16	395.	11.7	14.0	25.57	269	0	0	13.0
N239	001	1977	20.5	25.49	6.67	395.	20.4	16.0	25.57	269	0	0	13.0
N239	001	1978	21.9	27.29	7.74	395.	23.3	17.0	25.57	269	0	0	13.0
N239	001	1978	25.1	28.31	5.93	247.	15.6	17.0	25.57	269	0	0	17.0
N239	001	1979	27.8	30.67	5.88	247.	18.3	18.0	25.57	269	0	0	17.0
N239	001	1980	30.1	32.96	5.01	247.	21.2	19.0	25.57	269	0	0	17.0
N239	001	1981	31.7	34.77	4.25	247.	23.5	20.0	25.57	269	0	0	17.0
N239	001	1982	33.1	36.22	3.69	247.	25.5	21.0	25.57	269	0	0	17.0
N239	002	1969	2.5	6.50	3.64	1481.	5.3	8.0	23.24	269	112	9	8.0
N239	002	1970	3.6	8.43	5.11	1481.	8.9	9.0	23.24	269	112	9	8.0
N239	002	1971	4.8	10.16	6.96	1481.	12.8	10.1	23.24	269	112	9	8.0
N239	002	1972	4.8	11.01	8.15	1481.	15.0	11.0	23.24	269	112	9	8.0
N239	002	1973	5.1	12.09	9.55	1481.	18.1	12.1	23.24	269	112	9	8.0
N239	002	1974	10.2	14.63	4.12	395.	6.8	13.0	23.24	269	0	0	13.0
N239	002	1975	11.5	16.96	6.61	395.	9.1	14.0	23.24	269	0	0	13.0
N239	002	1977	15.2	22.51	14.47	395.	16.1	16.0	23.24	269	0	0	13.0
N239	002	1978	16.0	24.36	17.42	395.	18.9	17.0	23.24	269	0	0	13.0

Appendix 15. Data for diameter distributions in Pigeon Valley.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N239	002	1978	16.0	24.11	21.38	272.	12.8	17.0	23.24	269	0	0	17.0
N239	002	1979	17.7	26.70	26.67	272.	15.7	18.0	23.24	269	0	0	17.0
N239	002	1980	19.2	29.24	31.18	272.	18.8	19.0	23.24	269	0	0	17.0
N239	002	1981	20.4	31.20	35.86	272.	21.5	20.0	23.24	269	0	0	17.0
N239	002	1982	21.7	33.14	36.27	272.	24.1	21.0	23.24	269	0	0	17.0
N239	003	1969	1.8	7.02	8.07	1432.	6.4	8.0	24.07	0	0	0	8.0
N239	003	1970	2.5	8.40	10.18	1432.	9.1	9.0	24.07	0	0	0	8.0
N239	003	1971	3.6	10.14	12.93	1432.	13.0	10.1	24.07	0	0	0	8.0
N239	003	1972	3.8	11.01	14.61	1432.	15.2	11.0	24.07	0	0	0	8.0
N239	003	1973	4.3	12.39	18.82	1432.	19.3	12.1	24.07	0	0	0	8.0
N239	003	1974	11.2	15.77	3.30	370.	7.3	13.0	24.07	0	0	0	13.0
N239	003	1975	12.0	17.19	4.27	370.	8.7	14.0	24.07	0	0	0	13.0
N239	003	1977	14.4	20.07	4.79	370.	11.9	16.0	24.07	0	0	0	13.0
N239	003	1978	15.1	21.10	5.30	370.	13.1	17.0	24.07	0	0	0	13.0
N239	003	1978	15.1	21.02	6.30	247.	8.7	17.0	24.07	0	0	0	17.0
N239	003	1979	16.2	22.43	7.29	247.	9.9	18.0	24.07	0	0	0	17.0
N239	003	1980	17.5	23.84	8.29	247.	11.2	19.0	24.07	0	0	0	17.0
N239	003	1981	19.0	25.32	9.10	247.	12.6	20.0	24.07	0	0	0	17.0
N239	003	1982	20.9	26.72	9.52	247.	14.0	21.0	24.07	0	0	0	17.0
N239	004	1969	1.8	5.62	5.48	1481.	4.3	8.0	24.54	269	112	9	8.0
N239	004	1970	2.8	7.71	7.19	1481.	7.7	9.0	24.54	269	112	9	8.0
N239	004	1971	3.8	9.50	9.79	1481.	11.6	10.1	24.54	269	112	9	8.0
N239	004	1972	4.1	10.36	11.50	1481.	13.8	11.0	24.54	269	112	9	8.0
N239	004	1973	4.6	11.58	13.58	1481.	17.2	12.1	24.54	269	112	9	8.0
N239	004	1974	11.9	15.27	5.71	395.	7.4	13.0	24.54	269	0	0	13.0
N239	004	1975	13.5	17.71	7.05	395.	9.9	14.0	24.54	269	0	0	13.0
N239	004	1977	16.5	22.99	12.97	395.	16.8	16.0	24.54	269	0	0	13.0
N239	004	1978	17.5	24.43	14.15	395.	18.9	17.0	24.54	269	0	0	13.0
N239	004	1978	17.5	25.18	16.86	247.	12.6	17.0	24.54	269	0	0	17.0
N239	004	1979	19.5	27.50	17.45	247.	15.0	18.0	24.54	269	0	0	17.0
N239	004	1980	21.8	29.86	18.84	247.	17.6	19.0	24.54	269	0	0	17.0
N239	004	1981	23.7	31.77	20.80	247.	19.9	20.0	24.54	269	0	0	17.0
N239	004	1982	25.2	33.23	21.40	247.	21.8	21.0	24.54	269	0	0	17.0
N239	005	1969	1.8	6.77	6.68	1481.	6.1	8.0	24.22	0	0	0	8.0
N239	005	1970	2.8	8.28	7.99	1481.	8.9	9.0	24.22	0	0	0	8.0
N239	005	1971	3.8	9.89	9.37	1481.	12.5	10.1	24.22	0	0	0	8.0
N239	005	1972	4.3	10.62	10.87	1481.	14.4	11.0	24.22	0	0	0	8.0
N239	005	1973	4.8	11.72	12.65	1481.	17.5	12.1	24.22	0	0	0	8.0
N239	005	1974	10.7	15.29	6.27	346.	6.5	13.0	24.22	0	0	0	13.0
N239	005	1975	11.9	16.79	6.82	346.	7.8	14.0	24.22	0	0	0	13.0
N239	005	1977	14.4	19.85	8.85	346.	10.9	16.0	24.22	0	0	0	13.0
N239	005	1978	15.4	21.09	9.57	346.	12.3	17.0	24.22	0	0	0	13.0
N239	005	1978	15.4	20.59	9.86	247.	8.4	17.0	24.22	0	0	0	17.0
N239	005	1979	17.4	22.25	10.20	247.	9.8	18.0	24.22	0	0	0	17.0
N239	005	1980	18.6	23.81	11.94	247.	11.2	19.0	24.22	0	0	0	17.0
N239	005	1981	20.0	25.37	12.65	247.	12.7	20.0	24.22	0	0	0	17.0
N239	005	1982	21.3	27.03	14.08	247.	14.4	21.0	24.22	0	0	0	17.0
N239	006	1969	2.3	6.15	3.95	1481.	4.9	8.0	24.76	0	0	0	8.0
N239	006	1970	3.0	7.57	5.21	1481.	7.2	9.0	24.76	0	0	0	8.0
N239	006	1971	4.1	9.01	6.86	1481.	10.2	10.1	24.76	0	0	0	8.0
N239	006	1972	4.3	9.74	8.28	1481.	12.0	11.0	24.76	0	0	0	8.0
N239	006	1973	4.8	10.64	10.06	1481.	14.3	12.1	24.76	0	0	0	8.0
N239	006	1974	9.9	13.51	4.38	420.	6.1	13.0	24.76	0	0	0	13.0

Appendix 15. Data for diameter distributions in Pigeon Valley. (cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N239	006	1975	10.5	14.62	5.04	420.	7.2	14.0	24.76	0	0	0	13.0
N239	006	1977	11.6	17.14	6.24	420.	9.9	16.0	24.76	0	0	0	13.0
N239	006	1978	11.9	18.03	6.90	420.	10.9	17.0	24.76	0	0	0	13.0
N239	006	1978	16.7	19.43	2.81	247.	7.4	17.0	24.76	0	0	0	17.0
N239	006	1979	18.2	20.65	2.71	247.	8.3	18.0	24.76	0	0	0	17.0
N239	006	1980	19.4	21.87	2.87	247.	9.3	19.0	24.76	0	0	0	17.0
N239	006	1981	20.9	23.14	2.91	247.	10.4	20.0	24.76	0	0	0	17.0
N239	006	1982	22.2	24.43	3.16	247.	11.6	21.0	24.76	0	0	0	17.0
N392	011	1974	4.9	8.01	2.63	667.	3.5	6.0	28.76	0	75	0	6.0
N392	011	1975	7.5	10.15	3.63	633.	5.3	7.0	28.76	0	75	0	6.0
N392	011	1976	8.9	12.06	5.20	633.	7.5	8.0	28.76	0	75	0	6.0
N392	011	1977	10.2	14.15	7.21	622.	10.1	9.0	28.76	0	75	0	6.0
N392	011	1978	11.5	15.52	8.55	622.	12.2	10.0	28.76	0	75	0	6.0
N392	011	1978	11.7	16.35	9.37	267.	5.8	10.0	28.76	0	0	0	10.0
N392	011	1979	13.5	19.22	11.77	267.	8.0	11.0	28.76	0	0	0	10.0
N392	011	1980	15.4	22.04	15.50	267.	10.5	12.0	28.76	0	0	0	10.0
N392	011	1981	17.1	24.32	17.31	267.	12.7	13.0	28.76	0	0	0	10.0
N392	011	1982	18.6	26.20	18.39	267.	14.7	14.0	28.76	0	0	0	10.0
N392	012	1974	5.3	7.42	1.51	667.	3.0	6.0	27.04	300	75	0	6.0
N392	012	1975	8.1	10.91	2.24	622.	5.9	7.0	27.04	300	75	0	6.0
N392	012	1976	10.2	13.79	3.71	622.	9.5	8.0	27.04	300	75	0	6.0
N392	012	1977	12.1	16.18	5.05	556.	11.6	9.0	27.04	300	75	0	6.0
N392	012	1978	13.3	17.50	5.60	556.	13.6	10.0	27.04	300	75	0	6.0
N392	012	1978	13.3	17.84	7.79	267.	6.8	10.0	27.04	300	0	0	10.0
N392	012	1979	17.5	21.35	6.61	267.	9.7	11.0	27.04	300	0	0	10.0
N392	012	1980	21.1	25.02	6.06	256.	12.7	12.0	27.04	300	0	0	10.0
N392	012	1981	23.3	27.52	6.91	256.	15.3	13.0	27.04	300	0	0	10.0
N392	012	1982	24.9	29.34	7.91	256.	17.4	14.0	27.04	300	0	0	10.0
N392	013	1974	5.7	8.06	2.17	667.	3.5	6.0	27.55	100	75	0	6.0
N392	013	1975	7.8	10.92	2.93	656.	6.3	7.0	27.55	100	75	0	6.0
N392	013	1976	9.5	13.15	3.65	656.	9.1	8.0	27.55	100	75	0	6.0
N392	013	1977	10.8	15.21	4.32	578.	10.7	9.0	27.55	100	75	0	6.0
N392	013	1978	11.8	16.55	5.30	578.	12.7	10.0	27.55	100	75	0	6.0
N392	013	1978	11.8	16.57	3.71	267.	5.8	10.0	27.55	100	0	0	10.0
N392	013	1979	14.4	19.52	4.39	267.	8.1	11.0	27.55	100	0	0	10.0
N392	013	1980	16.5	22.40	5.73	267.	10.6	12.0	27.55	100	0	0	10.0
N392	013	1981	18.3	24.80	6.63	267.	13.0	13.0	27.55	100	0	0	10.0
N392	013	1982	19.9	26.51	6.65	267.	14.9	14.0	27.55	100	0	0	10.0
N392	014	1974	5.5	8.17	2.22	667.	3.6	6.0	28.11	200	75	0	6.0
N392	014	1975	8.0	11.42	3.14	656.	6.9	7.0	28.11	200	75	0	6.0
N392	014	1976	9.6	14.13	5.08	656.	10.5	8.0	28.11	200	75	0	6.0
N392	014	1977	11.0	16.43	7.29	533.	11.6	9.0	28.11	200	75	0	6.0
N392	014	1978	12.0	17.76	8.51	522.	13.3	10.0	28.11	200	75	0	6.0
N392	014	1978	12.7	18.56	8.29	267.	7.4	10.0	28.11	200	0	0	10.0
N392	014	1979	16.3	21.91	8.92	267.	10.2	11.0	28.11	200	0	0	10.0
N392	014	1980	19.7	25.34	10.09	267.	13.7	12.0	28.11	200	0	0	10.0
N392	014	1981	21.5	27.61	11.12	267.	16.2	13.0	28.11	200	0	0	10.0
N392	014	1982	23.2	29.29	11.64	256.	17.4	14.0	28.11	200	0	0	10.0
N392	021	1974	4.5	9.19	4.92	667.	4.7	6.0	28.57	300	75	0	6.0
N392	021	1975	6.7	12.80	7.80	667.	9.0	7.0	28.57	300	75	0	6.0
N392	021	1976	7.9	15.61	11.26	667.	13.3	8.0	28.57	300	75	0	6.0
N392	021	1977	9.1	18.07	14.32	644.	17.2	9.0	28.57	300	75	0	6.0
N392	021	1978	9.8	19.41	16.39	644.	19.9	10.0	28.57	300	75	0	6.0

Appendix 15. Data for diameter distributions in Pigeon Valley.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N392	021	1978	13.1	20.88	13.24	267.	9.4	10.0	28.57	300	0	0	10.0
N392	021	1979	16.0	24.38	14.65	267.	12.7	11.0	28.57	300	0	0	10.0
N392	021	1980	18.6	28.15	19.15	256.	16.3	12.0	28.57	300	0	0	10.0
N392	021	1981	20.3	30.57	21.94	256.	19.2	13.0	28.57	300	0	0	10.0
N392	021	1982	21.6	32.40	23.89	256.	21.5	14.0	28.57	300	0	0	10.0
N392	022	1974	6.7	11.11	4.73	667.	6.7	6.0	31.45	100	75	0	6.0
N392	022	1975	8.7	13.83	6.57	667.	10.4	7.0	31.45	100	75	0	6.0
N392	022	1976	9.8	15.99	8.48	667.	13.8	8.0	31.45	100	75	0	6.0
N392	022	1977	10.9	17.88	9.82	656.	17.0	9.0	31.45	100	75	0	6.0
N392	022	1978	11.1	19.05	10.77	656.	19.2	10.0	31.45	100	75	0	6.0
N392	022	1978	15.0	20.72	7.36	267.	9.1	10.0	31.45	100	0	0	10.0
N392	022	1979	17.0	23.72	9.19	267.	12.0	11.0	31.45	100	0	0	10.0
N392	022	1980	19.5	26.97	10.85	267.	15.5	12.0	31.45	100	0	0	10.0
N392	022	1981	21.4	29.35	12.50	267.	18.3	13.0	31.45	100	0	0	10.0
N392	022	1982	23.2	31.09	13.02	267.	20.5	14.0	31.45	100	0	0	10.0
N392	023	1974	4.3	11.13	7.65	656.	6.8	6.0	31.43	200	75	0	6.0
N392	023	1975	7.5	14.78	9.78	656.	11.7	7.0	31.43	200	75	0	6.0
N392	023	1976	9.5	17.44	13.38	656.	16.3	8.0	31.43	200	75	0	6.0
N392	023	1977	11.1	19.60	15.67	644.	20.2	9.0	31.43	200	75	0	6.0
N392	023	1978	12.2	20.83	16.94	644.	22.8	10.0	31.43	200	75	0	6.0
N392	023	1978	16.0	21.94	13.48	267.	10.4	10.0	31.43	200	0	0	10.0
N392	023	1979	18.7	25.19	12.31	267.	13.5	11.0	31.43	200	0	0	10.0
N392	023	1980	21.5	28.30	12.94	267.	17.0	12.0	31.43	200	0	0	10.0
N392	023	1981	23.5	30.43	14.59	267.	19.7	13.0	31.43	200	0	0	10.0
N392	023	1982	25.2	32.01	14.89	267.	21.8	14.0	31.43	200	0	0	10.0
N392	024	1974	4.8	9.58	3.88	667.	5.0	6.0	31.59	0	75	0	6.0
N392	024	1975	6.7	11.97	4.96	667.	7.8	7.0	31.59	0	75	0	6.0
N392	024	1976	8.2	13.92	5.63	667.	10.4	8.0	31.59	0	75	0	6.0
N392	024	1977	9.7	16.05	6.54	667.	13.8	9.0	31.59	0	75	0	6.0
N392	024	1978	10.6	17.46	7.48	667.	16.3	10.0	31.59	0	75	0	6.0
N392	024	1978	13.7	17.70	6.71	267.	6.7	10.0	31.59	0	0	0	10.0
N392	024	1979	15.7	20.40	8.57	267.	8.9	11.0	31.59	0	0	0	10.0
N392	024	1980	18.2	23.22	11.03	267.	11.5	12.0	31.59	0	0	0	10.0
N392	024	1981	20.0	25.42	13.29	267.	13.8	13.0	31.59	0	0	0	10.0
N392	024	1982	21.3	27.31	14.65	267.	15.9	14.0	31.59	0	0	0	10.0
N392	031	1974	5.4	8.81	3.86	667.	4.3	6.0	28.03	100	75	0	6.0
N392	031	1975	8.4	12.20	5.37	667.	8.1	7.0	28.03	100	75	0	6.0
N392	031	1976	9.8	14.44	7.01	667.	11.3	8.0	28.03	100	75	0	6.0
N392	031	1977	11.8	16.58	8.13	667.	14.8	9.0	28.03	100	75	0	6.0
N392	031	1978	13.0	18.08	8.78	667.	17.6	10.0	28.03	100	75	0	6.0
N392	031	1978	14.9	19.27	8.41	267.	7.9	10.0	28.03	100	0	0	10.0
N392	031	1979	17.5	22.23	8.33	256.	10.1	11.0	28.03	100	0	0	10.0
N392	031	1980	20.3	25.26	8.64	256.	13.0	12.0	28.03	100	0	0	10.0
N392	031	1981	22.7	27.68	9.06	256.	15.6	13.0	28.03	100	0	0	10.0
N392	031	1982	24.7	29.58	9.07	256.	17.7	14.0	28.03	100	0	0	10.0
N392	032	1974	5.0	8.13	2.40	667.	3.6	6.0	27.23	200	75	0	6.0
N392	032	1975	8.1	11.83	3.27	667.	7.5	7.0	27.23	200	75	0	6.0
N392	032	1976	10.4	14.83	5.36	667.	11.8	8.0	27.23	200	75	0	6.0
N392	032	1977	11.9	16.92	6.92	667.	15.3	9.0	27.23	200	75	0	6.0
N392	032	1978	12.5	18.21	7.87	667.	17.8	10.0	27.23	200	75	0	6.0
N392	032	1978	12.5	18.84	9.70	278.	7.9	10.0	27.23	200	0	0	10.0
N392	032	1979	14.7	21.42	10.44	278.	10.2	11.0	27.23	200	0	0	10.0
N392	032	1980	16.9	24.58	12.60	278.	13.4	12.0	27.23	200	0	0	10.0

Appendix 15. Data for diameter distributions in Pigeon Valley.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N392	032	1981	20.1	27.26	11.62	267.	15.8	13.0	27.23	200	0	0	10.0
N392	032	1982	21.8	29.00	12.26	267.	17.9	14.0	27.23	200	0	0	10.0
N392	033	1974	3.6	7.32	3.37	667.	3.0	6.0	28.34	0	75	0	6.0
N392	033	1975	5.4	9.59	4.36	667.	5.0	7.0	28.34	0	75	0	6.0
N392	033	1976	6.8	11.41	5.26	667.	7.1	8.0	28.34	0	75	0	6.0
N392	033	1977	8.4	13.42	6.03	667.	9.7	9.0	28.34	0	75	0	6.0
N392	033	1978	9.9	14.85	6.43	667.	11.9	10.0	28.34	0	75	0	6.0
N392	033	1978	11.2	16.29	6.35	267.	5.7	10.0	28.34	0	0	0	10.0
N392	033	1979	12.4	18.57	7.19	267.	7.4	11.0	28.34	0	0	0	10.0
N392	033	1980	13.9	20.98	8.44	267.	9.4	12.0	28.34	0	0	0	10.0
N392	033	1981	15.5	23.10	9.72	267.	11.4	13.0	28.34	0	0	0	10.0
N392	033	1982	17.1	24.94	10.74	267.	13.2	14.0	28.34	0	0	0	10.0
N392	034	1974	4.3	9.22	3.67	656.	4.6	6.0	27.09	300	75	0	6.0
N392	034	1975	7.3	13.40	4.03	656.	9.5	7.0	27.09	300	75	0	6.0
N392	034	1976	9.6	16.63	5.35	656.	14.5	8.0	27.09	300	75	0	6.0
N392	034	1977	11.1	19.14	6.70	633.	18.5	9.0	27.09	300	75	0	6.0
N392	034	1978	12.2	20.39	7.54	622.	20.7	10.0	27.09	300	75	0	6.0
N392	034	1978	12.2	20.86	7.45	267.	9.3	10.0	27.09	300	0	0	10.0
N392	034	1979	15.5	24.11	7.62	267.	12.3	11.0	27.09	300	0	0	10.0
N392	034	1980	18.1	27.67	9.15	267.	16.2	12.0	27.09	300	0	0	10.0
N392	034	1981	19.9	29.88	10.58	267.	18.9	13.0	27.09	300	0	0	10.0
N392	034	1982	21.5	31.55	11.87	267.	21.1	14.0	27.09	300	0	0	10.0

Appendix 16. Stand growth data for Motueka.

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N193	001	1975	741	3.9	7.1	7.4	741	6.0	8.0	9.1	26.39	0.0	0	0	0
N193	001	1976	741	3.9	7.1	7.4	741	8.3	9.1	10.5	26.39	0.0	0	0	0
N193	001	1977	741	3.9	7.1	7.4	741	10.6	10.0	12.3	26.39	0.0	0	0	0
N193	001	1978	741	3.9	7.1	7.4	741	13.5	11.0	13.3	26.39	0.0	0	0	0
N193	002	1975	741	2.6	7.1	6.6	741	3.9	8.0	7.2	24.01	7.1	150	0	0
N193	002	1976	741	2.6	7.1	6.6	741	4.9	9.1	7.8	24.01	7.1	150	0	0
N193	002	1977	741	2.6	7.1	6.6	741	5.7	10.0	7.9	24.01	7.1	150	0	0
N193	002	1978	741	2.6	7.1	6.6	741	6.8	11.0	8.5	24.01	7.1	150	0	0
N193	003	1975	741	7.8	7.1	8.9	741	12.6	8.0	10.3	28.81	7.1	0	75	0
N193	003	1976	741	7.8	7.1	8.9	741	17.9	9.1	12.5	28.81	7.1	0	75	0
N193	003	1977	741	7.8	7.1	8.9	741	22.0	10.0	14.2	28.81	7.1	0	75	0
N193	003	1978	741	7.8	7.1	8.9	741	27.0	11.0	15.7	28.81	7.1	0	75	0
N193	004	1975	741	2.6	7.1	6.5	741	4.3	8.0	7.3	23.65	7.1	150	0	0
N193	004	1976	741	2.6	7.1	6.5	741	5.6	9.1	8.5	23.65	7.1	150	0	0
N193	004	1977	741	2.6	7.1	6.5	741	6.6	10.0	9.6	23.65	7.1	150	0	0
N193	004	1978	741	2.6	7.1	6.5	741	7.9	11.0	11.7	23.65	7.1	150	0	0
N193	005	1975	741	2.2	7.1	7.5	741	3.9	8.0	8.5	25.40	0.0	0	0	0
N193	005	1976	741	2.2	7.1	7.5	741	5.9	9.1	9.6	25.40	0.0	0	0	0
N193	005	1977	741	2.2	7.1	7.5	741	7.8	10.0	11.1	25.40	0.0	0	0	0
N193	005	1978	741	2.2	7.1	7.5	741	10.6	11.0	13.0	25.40	0.0	0	0	0
N193	006	1975	741	7.9	7.1	10.2	741	12.6	8.0	12.0	31.16	7.1	0	75	0
N193	006	1976	741	7.9	7.1	10.2	741	17.5	9.1	14.1	31.16	7.1	0	75	0
N193	006	1977	741	7.9	7.1	10.2	741	22.0	10.0	15.7	31.16	7.1	0	75	0
N193	006	1978	741	7.9	7.1	10.2	741	26.6	11.0	17.7	31.16	7.1	0	75	0
N193	007	1975	716	1.8	7.1	6.6	716	3.1	8.0	7.6	24.25	0.0	0	0	0
N193	007	1976	716	1.8	7.1	6.6	716	4.5	9.1	9.0	24.25	0.0	0	0	0
N193	007	1977	716	1.8	7.1	6.6	716	5.8	10.0	10.7	24.25	0.0	0	0	0
N193	007	1978	716	1.8	7.1	6.6	716	7.6	11.0	12.8	24.25	0.0	0	0	0
N193	008	1975	741	8.0	7.1	9.2	741	13.8	8.0	11.4	29.48	7.1	150	75	0
N193	008	1976	741	8.0	7.1	9.2	741	20.0	9.1	12.3	29.48	7.1	150	75	0
N193	008	1977	741	8.0	7.1	9.2	741	25.0	10.0	15.1	29.48	7.1	150	75	0
N193	008	1978	741	8.0	7.1	9.2	741	29.0	11.0	16.4	29.48	7.1	150	75	0
N193	009	1975	741	4.0	7.1	7.7	741	6.6	8.0	10.3	28.44	0.0	0	0	0
N193	009	1976	741	4.0	7.1	7.7	741	9.3	9.1	12.3	28.44	0.0	0	0	0
N193	009	1977	741	4.0	7.1	7.7	741	11.9	10.0	13.4	28.44	0.0	0	0	0
N193	009	1978	741	4.0	7.1	7.7	741	14.9	11.0	15.5	28.44	0.0	0	0	0
N193	010	1975	741	1.3	7.1	4.7	741	2.5	8.0	6.0	21.14	0.0	0	0	0
N193	010	1976	741	1.3	7.1	4.7	741	4.0	9.1	8.0	21.14	0.0	0	0	0
N193	010	1977	741	1.3	7.1	4.7	741	5.5	10.0	9.8	21.14	0.0	0	0	0
N193	010	1978	741	1.3	7.1	4.7	741	7.5	11.0	10.5	21.14	0.0	0	0	0
N193	011	1975	716	2.4	7.1	7.1	716	4.2	8.0	8.3	25.03	7.1	150	0	0
N193	011	1976	716	2.4	7.1	7.1	716	5.6	9.1	10.0	25.03	7.1	150	0	0
N193	011	1977	716	2.4	7.1	7.1	716	6.8	10.0	11.8	25.03	7.1	150	0	0
N193	011	1978	716	2.4	7.1	7.1	716	8.6	11.0	13.7	25.03	7.1	150	0	0
N193	012	1975	741	7.6	7.1	8.9	741	13.5	8.0	10.7	28.81	7.1	0	75	0
N193	012	1976	741	7.6	7.1	8.9	741	18.7	9.1	13.2	28.81	7.1	0	75	0
N193	012	1977	741	7.6	7.1	8.9	741	23.3	10.0	15.0	28.81	7.1	0	75	0
N193	012	1978	741	7.6	7.1	8.9	741	27.8	11.0	17.3	28.81	7.1	0	75	0
N193	013	1975	741	8.4	7.1	10.7	741	15.9	8.0	12.3	32.12	7.1	150	75	0
N193	013	1976	741	8.4	7.1	10.7	741	23.0	9.1	14.3	32.12	7.1	150	75	0
N193	013	1977	741	8.4	7.1	10.7	741	28.2	10.0	15.6	32.12	7.1	150	75	0
N193	013	1978	741	8.4	7.1	10.7	741	32.7	11.0	18.0	32.12	7.1	150	75	0
N193	014	1975	741	9.6	7.1	10.7	741	16.3	8.0	12.3	32.19	7.1	150	75	0

Appendix 16. Stand growth data for Motueka.
(cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N193	014	1976	741	9.6	7.1	10.7	741	23.9	9.1	14.6	32.19	7.1	150	75	0
N193	014	1977	741	9.6	7.1	10.7	741	29.6	10.0	16.0	32.19	7.1	150	75	0
N193	014	1978	741	9.6	7.1	10.7	741	33.9	11.0	18.3	32.19	7.1	150	75	0
N193	015	1975	716	2.6	7.1	6.7	716	4.3	8.0	8.3	25.69	0.0	0	0	0
N193	015	1976	716	2.6	7.1	6.7	716	6.2	9.1	10.4	25.69	0.0	0	0	0
N193	015	1977	716	2.6	7.1	6.7	716	8.2	10.0	11.6	25.69	0.0	0	0	0
N193	015	1978	716	2.6	7.1	6.7	716	10.8	11.0	14.0	25.69	0.0	0	0	0
N195	002	1975	741	7.5	7.1	9.0	741	12.0	8.0	10.8	29.07	7.1	0	75	0
N195	002	1976	741	7.5	7.1	9.0	741	17.4	9.1	13.7	29.07	7.1	0	75	0
N195	002	1977	741	7.5	7.1	9.0	741	27.3	11.0	17.3	29.07	7.1	0	75	0
N195	003	1975	716	3.1	7.1	7.3	716	5.3	8.0	9.2	26.60	0.0	0	0	0
N195	003	1976	716	3.1	7.1	7.3	716	7.7	9.1	10.6	26.60	0.0	0	0	0
N195	003	1977	716	3.1	7.1	7.3	716	12.7	11.0	14.3	26.60	0.0	0	0	0
N195	010	1975	716	2.9	7.1	7.7	716	4.9	8.0	9.3	26.95	0.0	0	0	0
N195	010	1976	716	2.9	7.1	7.7	716	6.9	9.1	10.9	26.95	0.0	0	0	0
N195	010	1977	716	2.9	7.1	7.7	716	11.6	11.0	14.2	26.95	0.0	0	0	0
N195	011	1975	741	4.0	7.1	7.1	741	8.0	8.0	8.0	25.08	7.1	0	75	0
N195	011	1976	741	4.0	7.1	7.1	741	12.0	9.1	10.8	25.08	7.1	0	75	0
N195	011	1977	741	4.0	7.1	7.1	741	20.6	11.0	14.6	25.08	7.1	0	75	0
N195	019	1975	741	3.0	7.1	7.4	741	5.1	8.0	9.5	27.68	0.0	0	0	0
N195	019	1976	741	3.0	7.1	7.4	741	7.1	9.1	12.2	27.68	0.0	0	0	0
N195	019	1977	741	3.0	7.1	7.4	741	11.4	11.0	15.1	27.68	0.0	0	0	0
N195	020	1975	716	5.6	7.1	9.4	716	10.2	8.0	9.7	29.83	7.1	0	75	0
N195	020	1976	716	5.6	7.1	9.4	716	15.6	9.1	11.9	29.83	7.1	0	75	0
N195	020	1977	716	5.6	7.1	9.4	716	25.0	11.0	15.9	29.83	7.1	0	75	0
N496	711	1971	963	35.2	11.7	17.4	963	38.4	12.7	19.8	29.92	0.0	0	0	0
N496	711	1972	963	38.4	12.7	19.8	963	42.7	13.7	20.3	29.92	0.0	0	0	0
N496	711	1973	963	42.7	13.7	20.3	963	45.2	14.7	21.1	29.92	0.0	0	0	0
N496	711	1974	963	45.2	14.7	21.1	963	49.1	15.8	24.4	29.92	0.0	0	0	0
N496	711	1976	617	35.6	16.8	25.6	593	43.3	20.7	30.5	29.92	0.0	0	0	0
N496	711	1980	593	43.3	20.7	30.5	593	48.5	22.7	33.5	29.92	0.0	0	0	0
N496	722	1971	1383	44.9	14.7	23.0	1383	49.0	15.7	24.6	30.84	0.0	0	0	0
N496	712	1973	1383	49.0	15.7	24.6	1358	50.8	16.7	26.0	30.84	0.0	0	0	0
N496	712	1974	1358	50.8	16.7	26.0	1358	54.1	17.7	27.7	30.84	0.0	0	0	0
N496	712	1975	1358	54.1	17.7	27.7	1358	57.7	18.7	29.5	30.84	0.0	0	0	0
N496	718	1971	864	27.0	12.7	18.1	815	29.6	13.7	20.6	28.63	0.0	0	0	0
N496	718	1972	815	29.6	13.7	20.6	815	33.6	14.7	21.0	28.63	0.0	0	0	0
N496	718	1973	815	33.6	14.7	21.0	815	36.0	15.7	22.4	28.63	0.0	0	0	0
N496	718	1974	815	36.0	15.7	22.4	815	39.4	16.7	25.3	28.63	0.0	0	0	0
N496	718	1975	815	39.4	16.7	25.3	815	42.5	17.7	26.3	28.63	0.0	0	0	0
N496	718	1976	815	42.5	17.7	26.3	815	47.7	19.8	28.0	28.63	0.0	0	0	0
N496	718	1978	815	47.7	19.8	28.0	790	52.7	21.7	29.3	28.63	0.0	0	0	0
N496	718	1980	790	52.7	21.7	29.3	790	57.0	23.7	31.5	28.63	0.0	0	0	0
N496	714	1972	1506	36.9	18.7	23.1	1457	40.2	19.7	24.0	25.35	0.0	0	0	0
N496	714	1973	1457	40.2	19.7	24.0	1432	42.3	20.7	25.7	25.35	0.0	0	0	0
N496	714	1974	1432	42.3	20.7	25.7	1432	46.1	21.7	28.0	25.35	0.0	0	0	0
N496	714	1975	1432	46.1	21.7	28.0	1432	50.4	22.7	29.3	25.35	0.0	0	0	0
N496	714	1976	1432	50.4	22.7	29.3	1432	56.7	24.8	30.8	25.35	0.0	0	0	0
N496	714	1978	1432	56.7	24.8	30.8	1432	62.9	26.7	34.0	25.35	0.0	0	0	0
N496	718	1971	938	33.3	12.7	19.0	914	36.4	13.7	20.0	28.93	0.0	0	0	0
N496	718	1972	914	36.4	13.7	20.0	914	40.4	14.7	21.0	28.93	0.0	0	0	0
N496	718	1973	914	40.4	14.7	21.0	914	43.1	15.7	22.1	28.93	0.0	0	0	0
N496	718	1974	914	43.1	15.7	22.1	914	46.6	16.7	25.0	28.93	0.0	0	0	0

Appendix 16. Stand growth data for Motueka.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N496	718	1975	914	46.6	16.7	25.0	914	50.1	17.7	26.0	28.93	0.0	0	0	0
N496	718	1976	914	50.1	17.7	26.0	889	54.1	19.7	28.1	28.93	0.0	0	0	0
N496	718	1978	889	54.1	19.7	28.1	790	60.6	23.7	32.7	28.93	0.0	0	0	0
N496	719	1971	864	41.2	12.7	18.1	864	44.9	13.7	20.1	29.36	0.0	0	0	0
N496	719	1972	864	44.9	13.7	20.1	864	48.8	14.7	21.2	29.36	0.0	0	0	0
N496	719	1973	864	48.8	14.7	21.2	864	51.1	15.7	23.3	29.36	0.0	0	0	0
N496	719	1974	864	51.1	15.7	23.3	864	54.8	16.7	25.5	29.36	0.0	0	0	0
N496	719	1975	864	54.8	16.7	25.5	864	58.0	17.7	27.8	29.36	0.0	0	0	0
N496	719	1976	864	58.0	17.7	27.8	864	62.6	19.7	29.4	29.36	0.0	0	0	0
N496	719	1978	864	62.6	19.7	29.4	864	67.1	21.7	30.4	29.36	0.0	0	0	0
N496	719	1980	864	67.1	21.7	30.4	864	72.2	23.7	33.1	29.36	0.0	0	0	0
N496	710	1971	1259	50.7	14.7	25.4	1259	53.6	15.7	27.8	30.92	0.0	0	0	0
N496	710	1972	1259	53.6	15.7	27.8	1259	57.2	16.7	28.7	30.92	0.0	0	0	0
N496	710	1975	321	24.8	18.7	28.6	321	28.9	19.7	30.0	30.92	0.0	0	0	0
N496	710	1976	321	28.9	19.7	30.0	321	36.2	21.7	31.1	30.92	0.0	0	0	0
N496	710	1978	321	36.2	21.7	31.1	321	42.5	23.7	32.5	30.92	0.0	0	0	0
N496	710	1980	321	42.5	23.7	32.5	321	48.1	25.7	35.1	30.92	0.0	0	0	0
N496	711	1971	815	47.7	14.7	31.3	815	50.4	15.7	34.2	37.73	0.0	0	0	0
N496	711	1972	815	50.4	15.7	34.2	815	53.6	16.7	34.5	37.73	0.0	0	0	0
N496	711	1973	815	53.6	16.7	34.5	815	55.4	17.7	35.2	37.73	0.0	0	0	0
N496	711	1974	815	55.4	17.7	35.2	815	58.4	18.7	35.8	37.73	0.0	0	0	0
N496	711	1975	815	58.4	18.7	35.8	790	60.0	19.7	36.6	37.73	0.0	0	0	0
N496	711	1976	790	60.0	19.7	36.6	790	64.6	21.8	38.1	37.73	0.0	0	0	0
N496	711	1978	790	64.6	21.8	38.1	790	70.0	23.7	39.8	37.73	0.0	0	0	0
N496	712	1971	346	42.2	23.7	33.6	346	44.1	24.7	36.1	31.23	0.0	0	0	0
N496	712	1972	346	44.1	24.7	36.1	346	46.0	25.7	37.3	31.23	0.0	0	0	0
N496	712	1973	346	46.0	25.7	37.3	321	44.1	26.7	41.1	31.23	0.0	0	0	0
N496	726	1972	864	22.6	16.7	20.6	840	26.3	17.7	22.1	26.08	0.0	0	0	0
N496	726	1973	840	26.3	17.7	22.1	840	28.7	18.7	24.7	26.08	0.0	0	0	0
N496	726	1974	840	28.7	18.7	24.7	840	32.1	19.7	27.4	26.08	0.0	0	0	0
N496	726	1975	840	32.1	19.7	27.4	815	35.2	20.7	28.3	26.08	0.0	0	0	0
N496	726	1976	815	35.2	20.7	28.3	815	40.0	22.8	29.8	26.08	0.0	0	0	0
N496	726	1978	815	40.0	22.8	29.8	741	43.4	24.7	30.5	26.08	0.0	0	0	0
N496	726	1980	741	43.4	24.7	30.5	741	48.3	26.7	33.2	26.08	0.0	0	0	0
N496	728	1972	173	38.1	42.8	35.2	173	38.8	43.7	36.4	16.95	0.0	0	0	0
N496	728	1973	173	38.8	43.7	36.4	173	39.9	44.7	37.8	16.95	0.0	0	0	0
N496	728	1974	173	39.9	44.7	37.8	173	40.6	45.7	38.4	16.95	0.0	0	0	0
N496	728	1975	173	40.6	45.7	38.4	173	41.5	46.7	39.7	16.95	0.0	0	0	0
N496	729	1972	247	36.8	21.8	36.4	247	39.1	22.7	36.9	33.42	0.0	0	0	0
N496	729	1973	247	39.1	22.7	36.9	247	40.6	23.7	37.5	33.42	0.0	0	0	0
N496	729	1974	247	40.6	23.7	37.5	247	42.8	24.7	38.9	33.42	0.0	0	0	0
N496	729	1975	247	42.8	24.7	38.9	247	44.9	25.7	39.7	33.42	0.0	0	0	0
N496	729	1976	247	44.9	25.7	39.7	247	47.9	27.8	40.2	33.42	0.0	0	0	0
N496	727	1972	395	39.4	20.8	32.8	395	41.6	21.7	33.6	31.76	0.0	0	0	0
N496	727	1973	395	41.6	21.7	33.6	395	43.3	22.8	34.6	31.76	0.0	0	0	0
N496	727	1974	395	43.3	22.8	34.6	395	45.5	23.8	37.1	31.76	0.0	0	0	0
N496	727	1975	395	45.5	23.8	37.1	395	47.7	24.8	37.8	31.76	0.0	0	0	0
N496	727	1976	395	47.7	24.8	37.8	395	51.4	26.7	38.3	31.76	0.0	0	0	0
N496	729	1972	1383	27.7	8.8	14.2	1383	33.8	9.7	16.6	32.44	0.0	0	0	0
N496	729	1973	1383	33.8	9.7	16.6	1333	37.4	10.8	18.3	32.44	0.0	0	0	0
N496	729	1974	1333	37.4	10.8	18.3	1333	43.3	11.8	19.4	32.44	0.0	0	0	0
N496	729	1975	1333	43.3	11.8	19.4	1333	48.2	12.8	20.7	32.44	0.0	0	0	0
N496	729	1976	1333	48.2	12.8	20.7	1284	53.5	14.8	24.2	32.44	0.0	0	0	0

Appendix 16. Stand growth data for Motueka.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N496	729	1978	1284	53.5	14.8	24.2	1235	58.0	16.7	28.3	32.44	0.0	0	0	0
N496	729	1980	1235	58.0	16.7	28.3	1062	59.8	18.7	30.0	32.44	0.0	0	0	0
N496	720	1972	1185	29.6	10.8	18.0	1185	34.0	11.7	19.8	32.48	0.0	0	0	0
N496	720	1973	1185	34.0	11.7	19.8	1160	36.1	12.8	20.4	32.48	0.0	0	0	0
N496	720	1974	1160	36.1	12.8	20.4	1136	40.7	13.8	23.7	32.48	0.0	0	0	0
N496	735	1973	420	14.6	10.8	16.4	420	17.6	11.8	19.2	32.28	0.0	0	0	0
N496	735	1974	420	17.6	11.8	19.2	420	22.0	12.8	22.0	32.28	0.0	0	0	0
N496	735	1975	420	22.0	12.8	22.0	420	25.6	13.8	23.3	32.28	0.0	0	0	0
N496	735	1976	420	25.6	13.8	23.3	420	32.9	15.8	26.3	32.28	0.0	0	0	0
N496	735	1978	420	32.9	15.8	26.3	395	37.1	17.7	29.3	32.28	0.0	0	0	0
N496	735	1980	395	37.1	17.7	29.3	395	42.8	19.7	32.4	32.28	0.0	0	0	0
N496	736	1973	247	15.7	15.8	23.0	247	18.7	16.8	25.5	29.83	0.0	0	0	0
N496	736	1974	247	18.7	16.8	25.5	247	22.5	17.8	27.6	29.83	0.0	0	0	0
N496	808	1980	1033	23.8	11.0	16.2	1033	27.1	12.0	17.8	29.83	0.0	0	0	0
N496	808	1981	1033	27.1	12.0	17.8	1033	33.6	14.0	20.7	29.83	0.0	0	0	0
N496	801	1980	1617	45.3	14.0	21.2	1617	50.0	15.0	22.3	29.52	0.0	0	0	0
N496	801	1981	1617	50.0	15.0	22.3	1600	56.7	17.0	24.9	29.52	0.0	0	0	0
N496	804	1980	1833	44.6	11.0	16.2	1833	48.4	12.0	17.6	29.49	0.0	0	0	0
N496	804	1981	1833	48.4	12.0	17.6	1717	53.7	14.0	20.0	29.49	0.0	0	0	0
N496	805	1908	467	23.2	14.0	25.1	467	26.2	15.0	27.4	33.99	0.0	0	0	0
N496	805	1981	467	26.2	15.0	27.4	467	31.9	17.0	29.0	33.99	0.0	0	0	0

Appendix 17. Sectional measurement data for Motueka.
(80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	002	005	1975	8.9	9.6	0.00	6.8	5.89
N195	002	005	1975	6.3	6.8	1.40	6.8	5.89
N195	002	005	1975	6.0	6.6	1.59	6.8	5.89
N195	002	005	1975	5.3	5.7	2.38	6.8	5.89
N195	002	005	1975	4.1	4.5	3.57	6.8	5.89
N195	002	018	1975	15.1	15.9	0.00	13.1	8.25
N195	002	018	1975	13.7	14.5	0.70	13.1	8.25
N195	002	018	1975	10.2	10.8	2.75	13.1	8.25
N195	002	018	1975	7.8	8.4	4.35	13.1	8.25
N195	002	018	1975	5.3	5.7	5.83	13.1	8.25
N195	002	018	1975	3.6	4.0	6.84	13.1	8.25
N195	002	023	1975	6.5	6.8	0.00	6.0	6.35
N195	002	023	1975	6.1	6.4	0.75	6.0	6.35
N195	002	023	1975	5.8	6.0	1.40	6.0	6.35
N195	002	023	1975	5.2	5.6	2.00	6.0	6.35
N195	002	023	1975	3.5	3.7	4.29	6.0	6.35
N195	002	032	1975	14.6	15.5	0.00	14.8	7.62
N195	002	032	1975	14.3	15.2	0.80	14.8	7.62
N195	002	032	1975	14.0	14.8	1.40	14.8	7.62
N195	002	032	1975	10.9	11.5	2.50	14.8	7.62
N195	002	032	1975	8.8	9.4	3.65	14.8	7.62
N195	002	032	1975	4.0	4.3	5.97	14.8	7.62
N195	002	039	1975	12.8	13.6	0.00	12.4	9.20
N195	002	039	1975	11.7	12.4	1.40	12.4	9.20
N195	002	039	1975	9.7	10.3	3.10	12.4	9.20
N195	002	039	1975	8.5	9.0	4.35	12.4	9.20
N195	002	039	1975	4.9	5.4	6.70	12.4	9.20
N195	002	039	1975	3.1	3.5	7.97	12.4	9.20
N195	003	010	1975	4.4	4.9	0.00	3.3	3.12
N195	003	010	1975	3.7	4.1	0.70	3.3	3.12
N195	003	010	1975	2.4	2.6	1.74	3.3	3.12
N195	003	010	1975	1.6	1.8	2.32	3.3	3.12
N195	003	015	1975	10.6	11.4	0.00	9.4	5.65
N195	003	015	1975	9.7	10.4	0.70	9.4	5.65
N195	003	015	1975	7.0	7.6	2.06	9.4	5.65
N195	003	015	1975	5.1	5.5	3.14	9.4	5.65
N195	003	015	1975	3.0	3.4	4.27	9.4	5.65
N195	003	016	1975	4.3	4.5	0.00	2.5	2.32
N195	003	016	1975	3.3	3.5	0.70	2.5	2.32
N195	003	016	1975	2.3	2.5	1.40	2.5	2.32
N195	003	046	1975	14.4	16.1	0.00	12.9	8.75
N195	003	046	1975	13.2	14.5	0.70	12.9	8.75
N195	003	046	1975	9.9	10.5	2.31	12.9	8.75
N195	003	046	1975	7.6	8.1	3.74	12.9	8.75
N195	003	046	1975	6.6	7.0	4.68	12.9	8.75
N195	003	046	1975	5.1	5.5	5.49	12.9	8.75
N195	003	059	1975	12.5	13.6	0.00	10.2	7.11
N195	003	059	1975	11.0	11.9	0.70	10.2	7.11
N195	003	059	1975	9.6	10.2	1.40	10.2	7.11
N195	003	059	1975	7.3	7.8	3.23	10.2	7.11
N195	003	059	1975	5.7	6.1	4.14	10.2	7.11
N195	003	059	1975	4.1	4.5	5.25	10.2	7.11

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	010	003	1975	2.8	3.0	0.70	2.5	2.50
N195	010	003	1975	2.3	2.5	1.40	2.5	2.50
N195	010	003	1975	1.8	2.0	1.98	2.5	2.50
N195	010	013	1975	4.6	4.8	0.00	3.8	3.41
N195	010	013	1975	4.1	4.3	0.68	3.8	3.41
N195	010	013	1975	3.6	3.8	1.40	3.8	3.41
N195	010	013	1975	2.8	3.0	1.94	3.8	3.41
N195	010	037	1975	11.6	12.5	0.00	8.5	6.22
N195	010	037	1975	9.8	10.5	0.70	8.5	6.22
N195	010	037	1975	8.0	8.5	1.40	8.5	6.22
N195	010	037	1975	5.1	5.5	3.51	8.5	6.22
N195	010	037	1975	4.4	4.6	4.23	8.5	6.22
N195	010	040	1975	10.7	11.9	0.70	9.2	6.32
N195	010	040	1975	8.2	9.2	1.40	9.2	6.32
N195	010	040	1975	6.9	7.5	2.45	9.2	6.32
N195	010	040	1975	5.7	6.1	3.44	9.2	6.32
N195	010	040	1975	4.1	4.5	4.43	9.2	6.32
N195	010	040	1975	2.5	2.9	5.42	9.2	6.32
N195	010	048	1975	11.3	12.1	0.70	10.2	7.16
N195	010	048	1975	9.7	10.2	1.40	10.2	7.16
N195	010	048	1975	8.4	8.9	2.52	10.2	7.16
N195	010	048	1975	7.2	7.8	3.25	10.2	7.16
N195	010	048	1975	5.3	5.7	4.51	10.2	7.16
N195	010	048	1975	3.6	3.8	5.51	10.2	7.16
N195	011	008	1975	4.8	5.0	0.70	4.5	4.42
N195	011	008	1975	4.3	4.5	1.40	4.5	4.42
N195	011	008	1975	3.6	3.8	2.41	4.5	4.42
N195	011	008	1975	2.3	2.5	3.30	4.5	4.42
N195	011	013	1975	12.7	13.7	0.00	12.0	7.62
N195	011	013	1975	12.1	12.9	0.76	12.0	7.62
N195	011	013	1975	11.4	12.0	1.40	12.0	7.62
N195	011	013	1975	10.4	10.9	2.30	12.0	7.62
N195	011	013	1975	8.4	8.8	3.61	12.0	7.62
N195	011	013	1975	3.8	4.0	6.35	12.0	7.62
N195	011	030	1975	6.1	6.5	0.00	4.7	4.05
N195	011	030	1975	4.5	4.7	1.40	4.7	4.05
N195	011	030	1975	3.3	3.5	2.40	4.7	4.05
N195	011	030	1975	2.3	2.5	3.30	4.7	4.05
N195	011	040	1975	12.2	13.2	0.00	10.8	6.62
N195	011	040	1975	11.1	12.0	0.70	10.8	6.62
N195	011	040	1975	8.4	9.0	2.21	10.8	6.62
N195	011	040	1975	7.0	7.5	3.05	10.8	6.62
N195	011	040	1975	5.6	6.0	4.23	10.8	6.62
N195	011	040	1975	3.6	4.0	5.35	10.8	6.62
N195	011	057	1975	11.8	13.7	0.00	11.5	6.95
N195	011	057	1975	11.1	12.6	0.70	11.5	6.95
N195	011	057	1975	10.4	11.5	1.40	11.5	6.95
N195	011	057	1975	9.2	9.8	2.16	11.5	6.95
N195	011	057	1975	5.8	6.1	4.15	11.5	6.95
N195	019	001	1975	10.9	12.0	0.00	10.5	7.01
N195	019	001	1975	10.4	11.2	0.65	10.5	7.01
N195	019	001	1975	9.0	9.4	2.22	10.5	7.01

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	019	001	1975	7.6	8.0	3.18	10.5	7.01
N195	019	001	1975	5.8	6.2	3.95	10.5	7.01
N195	019	001	1975	4.4	4.6	5.04	10.5	7.01
N195	019	005	1975	12.0	13.5	0.00	11.3	8.58
N195	019	005	1975	11.3	12.4	0.70	11.3	8.58
N195	019	005	1975	10.6	11.3	1.40	11.3	8.58
N195	019	005	1975	9.2	9.8	2.53	11.3	8.58
N195	019	005	1975	7.6	8.0	3.68	11.3	8.58
N195	019	005	1975	5.3	5.5	5.47	11.3	8.58
N195	019	011	1975	4.5	4.7	0.00	3.3	3.26
N195	019	011	1975	3.8	4.0	0.70	3.3	3.26
N195	019	011	1975	3.1	3.3	1.40	3.3	3.26
N195	019	011	1975	2.7	2.9	1.88	3.3	3.26
N195	019	018	1975	11.0	11.8	0.00	9.0	7.24
N195	019	018	1975	8.6	9.0	1.40	9.0	7.24
N195	019	018	1975	7.2	7.4	2.82	9.0	7.24
N195	019	018	1975	6.4	6.6	5.31	9.0	7.24
N195	019	018	1975	5.4	5.6	5.44	9.0	7.24
N195	019	018	1975	3.3	3.5	5.46	9.0	7.24
N195	019	043	1975	5.0	5.2	0.00	2.6	2.68
N195	019	043	1975	3.7	3.9	0.70	2.6	2.68
N195	019	043	1975	2.4	2.6	1.40	2.6	2.68
N195	020	015	1975	17.1	18.6	0.00	14.8	9.10
N195	020	015	1975	15.5	16.7	0.70	14.8	9.10
N195	020	015	1975	12.7	13.5	2.82	14.8	9.10
N195	020	015	1975	10.5	11.0	3.50	14.8	9.10
N195	020	015	1975	7.7	8.1	4.76	14.8	9.10
N195	020	015	1975	5.7	6.1	6.17	14.8	9.10
N195	020	015	1975	4.1	4.3	7.87	14.8	9.10
N195	020	024	1975	4.7	4.9	0.70	4.7	5.00
N195	020	024	1975	4.5	4.7	1.40	4.7	5.00
N195	020	024	1975	3.8	4.0	2.40	4.7	5.00
N195	020	024	1975	3.4	3.6	3.13	4.7	5.00
N195	020	024	1975	2.8	3.0	3.66	4.7	5.00
N195	020	032	1975	12.9	14.3	0.00	12.0	9.30
N195	020	032	1975	12.2	13.2	0.75	12.0	9.30
N195	020	032	1975	9.9	10.3	2.78	12.0	9.30
N195	020	032	1975	9.1	9.5	3.64	12.0	9.30
N195	020	032	1975	8.4	8.6	4.67	12.0	9.30
N195	020	032	1975	6.3	6.5	5.91	12.0	9.30
N195	020	032	1975	4.2	4.4	7.63	12.0	9.30
N195	020	037	1975	7.0	7.8	0.00	7.6	6.55
N195	020	037	1975	7.1	7.7	0.70	7.6	6.55
N195	020	037	1975	6.3	6.5	2.16	7.6	6.55
N195	020	037	1975	5.1	5.3	3.24	7.6	6.55
N195	020	037	1975	4.2	4.4	4.00	7.6	6.55
N195	020	037	1975	2.8	3.0	5.09	7.6	6.55
N195	020	048	1975	15.8	17.2	0.00	13.7	9.49
N195	020	048	1975	14.3	15.4	0.65	13.7	9.49
N195	020	048	1975	12.9	13.7	1.40	13.7	9.49
N195	020	048	1975	11.4	12.1	2.51	13.7	9.49
N195	020	048	1975	10.6	11.2	3.59	13.7	9.49

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	020	048	1975	5.7	6.1	6.80	13.7	9.49
N195	020	048	1975	4.7	4.9	7.61	13.7	9.49
N195	002	017	1979	26.6	31.0	0.00	26.0	18.10
N195	002	017	1979	23.6	26.0	1.40	26.0	18.10
N195	002	017	1979	20.0	21.0	4.20	26.0	18.10
N195	002	017	1979	17.7	18.5	6.60	26.0	18.10
N195	002	017	1979	15.2	16.0	8.55	26.0	18.10
N195	002	017	1979	12.7	13.5	10.10	26.0	18.10
N195	002	017	1979	10.2	10.9	11.75	26.0	18.10
N195	002	017	1979	7.9	8.5	13.40	26.0	18.10
N195	002	017	1979	5.5	6.1	15.40	26.0	18.10
N195	002	019	1979	25.9	29.7	0.00	24.5	15.80
N195	002	019	1979	22.3	24.5	1.40	24.5	15.80
N195	002	019	1979	20.5	22.0	3.40	24.5	15.80
N195	002	019	1979	18.8	19.8	5.10	24.5	15.80
N195	002	019	1979	16.3	17.2	6.90	24.5	15.80
N195	002	019	1979	14.5	15.1	9.20	24.5	15.80
N195	002	019	1979	11.4	12.0	10.80	24.5	15.80
N195	002	019	1979	5.8	6.4	13.50	24.5	15.80
N195	002	010	1979	15.0	17.3	0.00	15.9	14.40
N195	002	010	1979	14.8	16.6	0.70	15.9	14.40
N195	002	010	1979	12.8	13.4	4.30	15.9	14.40
N195	002	010	1979	9.8	10.4	7.85	15.9	14.40
N195	002	010	1979	8.0	8.4	9.80	15.9	14.40
N195	002	010	1979	5.5	5.9	12.10	15.9	14.40
N195	002	012	1979	16.2	18.5	0.00	16.3	15.50
N195	002	012	1979	15.5	17.4	0.70	16.3	15.50
N195	002	012	1979	14.8	16.3	1.40	16.3	15.50
N195	002	012	1979	10.4	11.2	7.10	16.3	15.50
N195	002	012	1979	8.1	8.7	10.90	16.3	15.50
N195	002	014	1979	20.2	23.2	0.00	19.8	15.00
N195	002	014	1979	18.0	19.8	1.40	19.8	15.00
N195	002	014	1979	16.2	17.2	3.10	19.8	15.00
N195	002	014	1979	13.9	14.7	5.60	19.8	15.00
N195	002	014	1979	11.6	12.2	8.40	19.8	15.00
N195	002	014	1979	9.1	9.9	10.00	19.8	15.00
N195	002	013	1979	17.2	20.0	0.00	17.0	14.80
N195	002	013	1979	16.4	18.5	0.70	17.0	14.80
N195	002	013	1979	15.6	17.0	1.40	17.0	14.80
N195	002	013	1979	13.5	14.5	4.10	17.0	14.80
N195	002	013	1979	11.2	12.0	7.00	17.0	14.80
N195	002	013	1979	8.6	9.4	9.30	17.0	14.80
N195	003	021	1979	20.8	24.5	0.00	17.1	13.10
N195	003	021	1979	15.2	17.1	1.40	17.1	13.10
N195	003	021	1979	13.9	14.9	3.40	17.1	13.10
N195	003	021	1979	11.3	12.1	5.60	17.1	13.10
N195	003	021	1979	9.0	9.6	8.00	17.1	13.10
N195	003	021	1979	6.5	7.1	10.10	17.1	13.10
N195	003	023	1979	11.0	13.2	0.00	11.6	11.00
N195	003	023	1979	10.6	12.4	0.70	11.6	11.00
N195	003	023	1979	9.8	10.6	2.40	11.6	11.00
N195	003	023	1979	8.8	9.6	3.80	11.6	11.00

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	003	023	1979	7.0	7.6	6.80	11.6	11.00
N195	003	023	1979	5.9	6.5	7.10	11.6	11.00
N195	003	023	1979	5.1	5.5	8.00	11.6	11.00
N195	003	026	1979	10.3	12.1	0.00	11.4	12.70
N195	003	026	1979	9.9	10.5	2.40	11.4	12.70
N195	003	026	1979	8.9	9.5	4.20	11.4	12.70
N195	003	026	1979	7.9	8.5	5.80	11.4	12.70
N195	003	026	1979	6.9	7.3	7.60	11.4	12.70
N195	003	026	1979	6.0	6.4	8.40	11.4	12.70
N195	003	026	1979	4.9	5.3	9.60	11.4	12.70
N195	003	017	1979	15.3	18.3	0.00	14.5	12.70
N195	003	017	1979	14.3	16.4	0.70	14.5	12.70
N195	003	017	1979	13.3	14.5	1.40	14.5	12.70
N195	003	017	1979	12.5	13.5	2.40	14.5	12.70
N195	003	017	1979	11.7	12.5	3.45	14.5	12.70
N195	003	017	1979	10.7	11.5	4.60	14.5	12.70
N195	003	017	1979	8.7	9.5	6.90	14.5	12.70
N195	003	017	1979	7.9	8.5	8.00	14.5	12.70
N195	003	017	1979	5.9	6.5	9.10	14.5	12.70
N195	003	017	1979	4.8	5.2	9.80	14.5	12.70
N195	010	003	1979	18.0	20.5	0.70	18.6	14.50
N195	010	003	1979	16.9	18.6	1.40	18.6	14.50
N195	010	003	1979	15.2	16.2	3.20	18.6	14.50
N195	010	003	1979	12.8	13.6	6.00	18.6	14.50
N195	010	003	1979	10.4	11.1	8.00	18.6	14.50
N195	010	003	1979	7.8	8.6	9.80	18.6	14.50
N195	010	020	1979	18.9	21.5	1.40	21.5	15.20
N195	010	020	1979	17.0	19.1	2.20	21.5	15.20
N195	010	020	1979	14.8	16.2	4.50	21.5	15.20
N195	010	020	1979	13.5	14.5	6.00	21.5	15.20
N195	010	020	1979	10.7	11.5	8.20	21.5	15.20
N195	010	020	1979	8.2	9.0	10.20	21.5	15.20
N195	010	020	1979	6.9	7.5	10.80	21.5	15.20
N195	010	020	1979	4.4	5.0	12.50	21.5	15.20
N195	010	023	1979	15.2	17.7	0.00	14.7	13.40
N195	010	023	1979	14.4	16.2	0.70	14.7	13.40
N195	010	023	1979	13.6	14.7	1.40	14.7	13.40
N195	010	023	1979	11.7	12.7	3.10	14.7	13.40
N195	010	023	1979	10.7	11.7	4.20	14.7	13.40
N195	010	023	1979	9.7	10.7	4.90	14.7	13.40
N195	010	023	1979	8.9	9.7	6.20	14.7	13.40
N195	010	023	1979	8.1	8.9	7.10	14.7	13.40
N195	010	023	1979	6.2	6.8	8.80	14.7	13.40
N195	010	018	1979	11.4	14.2	0.00	11.8	10.20
N195	010	018	1979	10.6	11.8	1.40	11.8	10.20
N195	010	018	1979	9.9	10.8	3.10	11.8	10.20
N195	010	018	1979	8.8	9.6	4.30	11.8	10.20
N195	010	018	1979	6.6	7.3	6.10	11.8	10.20
N195	010	018	1979	5.9	6.6	6.50	11.8	10.20
N195	010	018	1979	5.1	5.8	7.40	11.8	10.20
N195	010	008	1979	11.7	14.5	0.00	11.1	10.30
N195	010	008	1979	10.8	12.8	0.70	11.1	10.30

Appendix 17. Sectional measurement data for Motueka. (cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	010	008	1979	9.9	11.1	1.40	11.1	10.30
N195	010	008	1979	7.3	8.0	4.90	11.1	10.30
N195	010	008	1979	6.6	7.1	6.10	11.1	10.30
N195	010	008	1979	5.5	6.1	7.00	11.1	10.30
N195	011	001	1979	24.6	27.9	0.00	21.5	14.90
N195	011	001	1979	19.4	21.5	1.40	21.5	14.90
N195	011	001	1979	18.0	19.0	2.40	21.5	14.90
N195	011	001	1979	13.2	14.0	6.50	21.5	14.90
N195	011	001	1979	10.5	11.2	8.50	21.5	14.90
N195	011	001	1979	7.7	8.5	10.50	21.5	14.90
N195	011	001	1979	6.5	7.0	12.10	21.5	14.90
N195	011	013	1979	22.5	25.9	0.00	21.5	14.60
N195	011	013	1979	21.1	23.7	0.70	21.5	14.60
N195	011	013	1979	19.7	21.5	1.40	21.5	14.60
N195	011	013	1979	15.7	16.5	4.40	21.5	14.60
N195	011	013	1979	13.4	14.0	6.40	21.5	14.60
N195	011	013	1979	10.8	11.4	8.60	21.5	14.60
N195	011	013	1979	5.8	6.3	11.70	21.5	14.60
N195	011	018	1979	16.0	18.6	0.00	15.2	11.30
N195	011	018	1979	14.7	16.9	0.70	15.2	11.30
N195	011	018	1979	13.4	15.2	1.40	15.2	11.30
N195	011	018	1979	9.6	10.2	5.90	15.2	11.30
N195	011	018	1979	7.1	7.7	8.70	15.2	11.30
N195	011	018	1979	4.5	5.2	9.90	15.2	11.30
N195	011	023	1979	15.3	18.4	0.00	15.0	11.20
N195	011	023	1979	14.6	16.7	0.70	15.0	11.20
N195	011	023	1979	11.6	12.5	3.70	15.0	11.20
N195	011	023	1979	9.5	10.0	6.10	15.0	11.20
N195	011	023	1979	6.9	7.5	8.00	15.0	11.20
N195	011	023	1979	6.6	7.0	8.60	15.0	11.20
N195	011	021	1979	16.3	18.0	1.40	18.0	14.10
N195	011	021	1979	14.8	15.7	3.20	18.0	14.10
N195	011	021	1979	12.2	13.0	6.00	18.0	14.10
N195	011	021	1979	9.8	10.5	8.20	18.0	14.10
N195	011	021	1979	7.8	8.6	10.00	18.0	14.10
N195	011	021	1979	4.9	5.5	11.40	18.0	14.10
N195	019	023	1979	10.3	11.1	0.00	9.4	9.20
N195	019	023	1979	9.5	10.3	0.80	9.4	9.20
N195	019	023	1979	7.8	8.4	3.30	9.4	9.20
N195	019	023	1979	6.8	7.4	4.10	9.4	9.20
N195	019	023	1979	6.0	6.4	5.10	9.4	9.20
N195	019	023	1979	5.0	5.4	6.10	9.4	9.20
N195	019	025	1979	11.0	12.0	0.00	9.8	11.10
N195	019	025	1979	10.1	10.9	0.70	9.8	11.10
N195	019	025	1979	9.2	9.8	1.40	9.8	11.10
N195	019	025	1979	8.1	8.7	2.90	9.8	11.10
N195	019	025	1979	6.2	6.6	5.90	9.8	11.10
N195	019	025	1979	5.3	5.7	7.00	9.8	11.10
N195	019	001	1979	20.0	21.9	1.40	21.9	16.20
N195	019	001	1979	18.2	19.4	2.80	21.9	16.20
N195	019	001	1979	15.9	16.9	5.20	21.9	16.20
N195	019	001	1979	13.5	14.3	7.10	21.9	16.20

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	019	001	1979	10.8	11.6	8.80	21.9	16.20
N195	019	001	1979	8.5	9.1	10.40	21.9	16.20
N195	019	001	1979	6.6	7.0	12.10	21.9	16.20
N195	019	004	1979	20.0	22.1	1.40	22.1	15.90
N195	019	004	1979	18.4	19.6	3.80	22.1	15.90
N195	019	004	1979	16.4	17.4	5.40	22.1	15.90
N195	019	004	1979	13.5	14.3	7.80	22.1	15.90
N195	019	004	1979	11.3	12.1	9.00	22.1	15.90
N195	019	004	1979	9.2	9.8	11.10	22.1	15.90
N195	019	004	1979	6.5	6.9	12.40	22.1	15.90
N195	019	027	1979	12.7	16.3	0.00	12.7	11.70
N195	019	027	1979	12.0	14.5	0.70	12.7	11.70
N195	019	027	1979	11.3	12.7	1.40	12.7	11.70
N195	019	027	1979	10.7	11.7	2.40	12.7	11.70
N195	019	027	1979	8.3	8.7	6.70	12.7	11.70
N195	019	027	1979	7.3	7.7	8.30	12.7	11.70
N195	019	027	1979	5.4	5.8	8.60	12.7	11.70
N195	020	001	1979	27.9	31.2	0.00	23.8	16.00
N195	020	001	1979	24.9	27.5	0.70	23.8	16.00
N195	020	001	1979	21.8	23.8	1.40	23.8	16.00
N195	020	001	1979	17.1	18.3	4.90	23.8	16.00
N195	020	001	1979	15.1	16.3	6.15	23.8	16.00
N195	020	001	1979	12.6	13.8	8.22	23.8	16.00
N195	020	001	1979	10.2	11.2	9.90	23.8	16.00
N195	020	001	1979	4.2	5.1	13.90	23.8	16.00
N195	020	016	1979	26.6	31.6	0.00	25.8	17.10
N195	020	016	1979	25.0	28.7	0.70	25.8	17.10
N195	020	016	1979	23.4	25.8	1.40	25.8	17.10
N195	020	016	1979	20.7	22.3	3.00	25.8	17.10
N195	020	016	1979	17.1	18.3	5.65	25.8	17.10
N195	020	016	1979	14.3	15.3	8.25	25.8	17.10
N195	020	016	1979	12.1	13.3	9.95	25.8	17.10
N195	020	016	1979	9.7	10.7	11.95	25.8	17.10
N195	020	016	1979	3.6	4.5	15.75	25.8	17.10
N195	020	014	1979	18.5	21.2	0.00	18.0	17.70
N195	020	014	1979	17.5	19.6	0.70	18.0	17.70
N195	020	014	1979	16.5	18.0	1.40	18.0	17.70
N195	020	014	1979	14.6	15.5	3.90	18.0	17.70
N195	020	014	1979	8.6	9.6	11.50	18.0	17.70
N195	020	014	1979	5.5	6.5	14.25	18.0	17.70
N195	020	023	1979	19.0	22.4	0.00	18.0	15.90
N195	020	023	1979	17.8	20.2	0.70	18.0	15.90
N195	020	023	1979	16.6	18.0	1.40	18.0	15.90
N195	020	023	1979	12.1	13.1	6.60	18.0	15.90
N195	020	023	1979	9.6	10.5	9.55	18.0	15.90
N195	020	023	1979	6.5	7.6	11.50	18.0	15.90
N195	020	021	1979	21.1	24.2	0.00	20.6	16.60
N195	020	021	1979	20.1	22.4	0.70	20.6	16.60
N195	020	021	1979	17.0	18.1	3.05	20.6	16.60
N195	020	021	1979	14.5	15.6	5.35	20.6	16.60
N195	020	021	1979	11.4	12.3	8.75	20.6	16.60
N195	020	021	1979	6.2	7.2	12.75	20.6	16.60

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	020	021	1979	3.7	4.7	14.75	20.6	16.60
N193	001	011	1975	4.5	4.7	0.70	4.3	4.22
N193	001	011	1975	4.1	4.3	1.40	4.3	4.22
N193	001	011	1975	3.7	3.9	2.00	4.3	4.22
N193	001	011	1975	2.9	3.1	2.37	4.3	4.22
N193	001	011	1975	2.6	2.8	2.97	4.3	4.22
N193	001	022	1975	13.8	15.2	0.00	12.1	10.14
N193	001	022	1975	12.5	13.6	0.65	12.1	10.14
N193	001	022	1975	11.3	12.1	1.40	12.1	10.14
N193	001	022	1975	9.8	10.3	2.82	12.1	10.14
N193	001	022	1975	6.7	6.9	5.51	12.1	10.14
N193	001	022	1975	5.8	6.0	6.36	12.1	10.14
N193	001	022	1975	4.7	4.9	7.19	12.1	10.14
N193	001	032	1975	10.6	11.3	0.00	9.7	7.44
N193	001	032	1975	8.3	8.5	2.22	9.7	7.44
N193	001	032	1975	7.6	7.8	2.90	9.7	7.44
N193	001	032	1975	6.6	6.8	3.49	9.7	7.44
N193	001	032	1975	5.3	5.5	4.55	9.7	7.44
N193	001	032	1975	4.0	4.2	5.34	9.7	7.44
N193	001	037	1975	4.0	4.4	0.00	3.0	3.23
N193	001	037	1975	3.4	3.7	0.70	3.0	3.23
N193	001	037	1975	2.8	3.0	1.40	3.0	3.23
N193	001	037	1975	1.5	1.7	2.38	3.0	3.23
N193	001	044	1975	9.0	9.5	1.40	9.5	7.07
N193	001	044	1975	8.0	8.2	2.02	9.5	7.07
N193	001	044	1975	7.3	7.5	2.63	9.5	7.07
N193	001	044	1975	6.0	6.2	3.33	9.5	7.07
N193	001	044	1975	5.0	5.2	4.15	9.5	7.07
N193	001	044	1975	3.3	3.5	5.30	9.5	7.07
N193	002	008	1975	10.1	10.8	0.00	9.7	7.96
N193	002	008	1975	9.6	10.3	0.80	9.7	7.96
N193	002	008	1975	7.7	7.9	2.65	9.7	7.96
N193	002	008	1975	7.0	7.2	3.22	9.7	7.96
N193	002	008	1975	5.2	5.4	4.75	9.7	7.96
N193	002	008	1975	3.9	4.1	5.74	9.7	7.96
N193	002	012	1975	4.4	4.6	0.00	2.8	2.78
N193	002	012	1975	3.5	3.7	0.70	2.8	2.78
N193	002	012	1975	1.3	1.5	2.12	2.8	2.78
N193	002	046	1975	12.1	13.1	0.00	9.4	6.44
N193	002	046	1975	8.8	9.4	1.40	9.4	6.44
N193	002	046	1975	6.5	6.8	2.72	9.4	6.44
N193	002	046	1975	4.8	5.0	3.75	9.4	6.44
N193	002	046	1975	4.2	4.4	4.52	9.4	6.44
N193	002	046	1975	2.5	2.7	5.49	9.4	6.44
N193	002	052	1975	5.2	5.5	0.74	4.9	4.56
N193	002	052	1975	4.5	4.9	1.40	4.9	4.56
N193	002	052	1975	4.0	4.2	2.10	4.9	4.56
N193	002	052	1975	3.2	3.4	2.98	4.9	4.56
N193	002	052	1975	2.2	2.4	3.44	4.9	4.56
N193	002	053	1975	12.2	13.3	0.00	10.6	8.39
N193	002	053	1975	11.0	11.9	0.65	10.6	8.39
N193	002	053	1975	8.5	8.9	2.54	10.6	8.39

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	002	053	1975	8.1	8.4	3.39	10.6	8.39
N193	002	053	1975	6.2	6.4	4.56	10.6	8.39
N193	002	053	1975	4.6	4.8	5.71	10.6	8.39
N193	003	004	1975	9.5	10.0	0.00	8.3	7.45
N193	003	004	1975	8.6	9.1	0.63	8.3	7.45
N193	003	004	1975	7.9	8.3	1.40	8.3	7.45
N193	003	004	1975	6.6	6.8	3.21	8.3	7.45
N193	003	004	1975	5.5	5.7	4.06	8.3	7.45
N193	003	004	1975	5.0	5.2	4.55	8.3	7.45
N193	003	022	1975	15.1	16.8	0.00	15.0	10.62
N193	003	022	1975	14.6	15.9	0.70	15.0	10.62
N193	003	022	1975	12.0	12.5	2.30	15.0	10.62
N193	003	022	1975	10.2	10.7	4.26	15.0	10.62
N193	003	022	1975	6.8	7.0	6.76	15.0	10.62
N193	003	022	1975	5.6	5.8	7.48	15.0	10.62
N193	003	022	1975	4.0	4.2	8.60	15.0	10.62
N193	003	036	1975	7.2	7.7	0.00	6.7	7.20
N193	003	036	1975	6.8	7.2	0.70	6.7	7.20
N193	003	036	1975	6.3	6.7	1.40	6.7	7.20
N193	003	036	1975	5.9	6.1	2.30	6.7	7.20
N193	003	036	1975	5.3	5.5	3.16	6.7	7.20
N193	003	036	1975	4.5	4.7	3.95	6.7	7.20
N193	003	040	1975	16.0	17.3	0.60	16.0	10.43
N193	003	040	1975	15.2	16.0	1.40	16.0	10.43
N193	003	040	1975	12.9	13.5	3.00	16.0	10.43
N193	003	040	1975	11.1	11.6	4.38	16.0	10.43
N193	003	040	1975	6.9	7.3	7.02	16.0	10.43
N193	003	040	1975	5.5	5.7	7.83	16.0	10.43
N193	003	040	1975	3.6	3.8	9.00	16.0	10.43
N193	003	045	1975	13.8	15.2	0.78	13.9	9.43
N193	003	045	1975	12.9	13.9	1.40	13.9	9.43
N193	003	045	1975	11.4	12.0	2.42	13.9	9.43
N193	003	045	1975	8.5	8.9	4.81	13.9	9.43
N193	003	045	1975	7.0	7.2	5.86	13.9	9.43
N193	003	045	1975	5.8	6.0	7.13	13.9	9.43
N193	003	045	1975	4.0	4.2	7.68	13.9	9.43
N193	004	002	1975	13.2	14.3	0.64	11.5	7.83
N193	004	002	1975	11.1	11.5	1.40	11.5	7.83
N193	004	002	1975	8.5	8.7	2.60	11.5	7.83
N193	004	002	1975	7.0	7.2	3.60	11.5	7.83
N193	004	002	1975	5.2	5.4	5.15	11.5	7.83
N193	004	002	1975	3.9	4.1	5.84	11.5	7.83
N193	004	011	1975	3.5	3.7	0.00	2.7	3.30
N193	004	011	1975	3.0	3.2	0.70	2.7	3.30
N193	004	011	1975	2.5	2.7	1.40	2.7	3.30
N193	004	011	1975	1.6	1.8	2.35	2.7	3.30
N193	004	025	1975	10.9	11.5	0.00	9.9	6.98
N193	004	025	1975	10.1	10.7	0.66	9.9	6.98
N193	004	025	1975	9.3	9.9	1.40	9.9	6.98
N193	004	025	1975	6.1	6.3	3.49	9.9	6.98
N193	004	025	1975	4.8	5.0	4.44	9.9	6.98
N193	004	025	1975	3.5	3.7	5.40	9.9	6.98

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	004	053	1975	6.3	6.9	0.00	4.1	4.18
N193	004	053	1975	5.1	5.5	0.70	4.1	4.18
N193	004	053	1975	3.2	3.4	2.14	4.1	4.18
N193	004	053	1975	2.1	2.3	2.98	4.1	4.18
N193	004	054	1975	9.8	10.7	0.00	8.6	6.43
N193	004	054	1975	8.9	9.7	0.80	8.6	6.43
N193	004	054	1975	8.0	8.6	1.40	8.6	6.43
N193	004	054	1975	7.4	7.8	2.14	8.6	6.43
N193	004	054	1975	6.8	7.0	2.90	8.6	6.43
N193	004	054	1975	4.3	4.5	4.56	8.6	6.43
N193	005	004	1975	11.7	12.6	0.00	9.9	7.96
N193	005	004	1975	10.5	11.3	0.76	9.9	7.96
N193	005	004	1975	8.7	9.1	2.42	9.9	7.96
N193	005	004	1975	7.0	7.2	3.13	9.9	7.96
N193	005	004	1975	5.9	6.1	4.03	9.9	7.96
N193	005	004	1975	4.5	4.7	5.26	9.9	7.96
N193	005	018	1975	12.2	13.4	0.00	11.4	6.99
N193	005	018	1975	10.7	11.4	1.40	11.4	6.99
N193	005	018	1975	8.6	9.0	2.22	11.4	6.99
N193	005	018	1975	8.1	8.3	2.95	11.4	6.99
N193	005	018	1975	5.0	5.2	4.43	11.4	6.99
N193	005	018	1975	3.7	3.9	5.10	11.4	6.99
N193	005	024	1975	4.3	4.5	0.00	3.3	3.80
N193	005	024	1975	3.7	3.9	0.70	3.3	3.80
N193	005	024	1975	3.1	3.3	1.40	3.3	3.80
N193	005	024	1975	1.8	2.0	2.78	3.3	3.80
N193	005	057	1975	4.8	5.0	0.00	4.4	4.75
N193	005	057	1975	4.2	4.4	1.40	4.4	4.75
N193	005	057	1975	3.3	3.5	2.50	4.4	4.75
N193	005	057	1975	2.3	2.5	3.65	4.4	4.75
N193	005	058	1975	11.5	12.4	0.00	8.9	7.43
N193	005	058	1975	9.9	10.7	0.72	8.9	7.43
N193	005	058	1975	8.4	8.9	1.40	8.9	7.43
N193	005	058	1975	7.8	8.0	2.22	8.9	7.43
N193	005	058	1975	6.1	6.3	3.19	8.9	7.43
N193	005	058	1975	4.7	4.9	4.94	8.9	7.43
N193	006	012	1975	18.0	19.5	0.00	15.0	9.84
N193	006	012	1975	15.9	17.2	0.68	15.0	9.84
N193	006	012	1975	12.1	12.8	2.80	15.0	9.84
N193	006	012	1975	10.0	10.5	4.44	15.0	9.84
N193	006	012	1975	8.8	9.0	5.39	15.0	9.84
N193	006	012	1975	5.4	5.6	7.23	15.0	9.84
N193	006	012	1975	3.7	3.9	8.00	15.0	9.84
N193	006	028	1975	5.4	6.0	0.00	5.4	6.64
N193	006	028	1975	5.2	5.4	1.40	5.4	6.64
N193	006	028	1975	4.9	5.1	2.35	5.4	6.64
N193	006	028	1975	4.3	4.5	3.38	5.4	6.64
N193	006	028	1975	3.4	3.6	4.51	5.4	6.64
N193	006	039	1975	12.7	13.8	0.00	11.5	9.60
N193	006	039	1975	11.8	12.6	0.65	11.5	9.60
N193	006	039	1975	11.0	11.5	1.40	11.5	9.60
N193	006	039	1975	9.6	9.8	3.70	11.5	9.60

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	006	039	1975	8.8	9.0	4.72	11.5	9.60
N193	006	039	1975	7.0	7.2	5.68	11.5	9.60
N193	006	039	1975	3.9	4.1	7.98	11.5	9.60
N193	006	054	1975	13.5	14.5	0.00	12.1	9.58
N193	006	054	1975	12.5	13.4	0.80	12.1	9.58
N193	006	054	1975	11.4	12.1	1.40	12.1	9.58
N193	006	054	1975	8.1	8.5	4.08	12.1	9.58
N193	006	054	1975	6.7	7.1	5.15	12.1	9.58
N193	006	054	1975	5.3	5.5	6.12	12.1	9.58
N193	006	058	1975	6.8	7.3	0.00	6.5	7.26
N193	006	058	1975	6.5	6.9	0.70	6.5	7.26
N193	006	058	1975	5.7	5.9	2.74	6.5	7.26
N193	006	058	1975	5.2	5.4	3.70	6.5	7.26
N193	006	058	1975	4.3	4.5	4.95	6.5	7.26
N193	007	021	1975	3.7	3.9	0.00	2.5	3.27
N193	007	021	1975	3.0	3.2	0.70	2.5	3.27
N193	007	021	1975	1.1	1.3	2.48	2.5	3.27
N193	007	022	1975	4.6	4.8	0.00	2.8	3.03
N193	007	022	1975	3.6	3.8	0.70	2.8	3.03
N193	007	022	1975	2.6	2.8	1.40	2.8	3.03
N193	007	053	1975	10.0	10.9	0.00	9.5	7.51
N193	007	053	1975	8.8	9.5	1.40	9.5	7.51
N193	007	053	1975	7.3	7.5	2.58	9.5	7.51
N193	007	053	1975	6.4	6.6	3.30	9.5	7.51
N193	007	053	1975	4.5	4.7	4.24	9.5	7.51
N193	007	053	1975	3.5	3.7	5.37	9.5	7.51
N193	007	055	1975	8.2	9.0	0.00	7.7	6.36
N193	007	055	1975	7.7	8.3	0.64	7.7	6.36
N193	007	055	1975	7.3	7.7	1.40	7.7	6.36
N193	007	055	1975	6.4	6.6	2.12	7.7	6.36
N193	007	055	1975	3.9	4.1	4.25	7.7	6.36
N193	007	055	1975	3.0	3.2	5.07	7.7	6.36
N193	007	057	1975	8.6	9.4	0.00	8.2	7.43
N193	007	057	1975	8.2	8.8	0.75	8.2	7.43
N193	007	057	1975	7.7	8.2	1.40	8.2	7.43
N193	007	057	1975	6.3	6.7	2.68	8.2	7.43
N193	007	057	1975	5.3	5.5	3.84	8.2	7.43
N193	007	057	1975	4.3	4.5	4.69	8.2	7.43
N193	008	006	1975	5.4	5.6	0.00	5.0	5.74
N193	008	006	1975	4.8	5.0	1.40	5.0	5.74
N193	008	006	1975	4.4	4.6	2.02	5.0	5.74
N193	008	006	1975	3.8	4.0	2.95	5.0	5.74
N193	008	006	1975	2.8	3.0	4.04	5.0	5.74
N193	008	015	1975	14.0	16.0	0.00	13.5	9.39
N193	008	015	1975	13.1	14.7	0.63	13.5	9.39
N193	008	015	1975	10.7	11.1	2.50	13.5	9.39
N193	008	015	1975	10.0	10.2	3.45	13.5	9.39
N193	008	015	1975	7.9	8.1	4.56	13.5	9.39
N193	008	015	1975	5.0	5.2	6.85	13.5	9.39
N193	008	032	1975	7.7	8.4	0.00	7.4	6.67
N193	008	032	1975	7.3	7.9	0.70	7.4	6.67
N193	008	032	1975	7.0	7.4	1.40	7.4	6.67

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	008	032	1975	5.8	6.0	3.25	7.4	6.67
N193	008	032	1975	4.8	5.0	4.00	7.4	6.67
N193	008	032	1975	3.3	3.5	5.01	7.4	6.67
N193	008	049	1975	16.3	18.3	0.00	14.3	9.81
N193	008	049	1975	14.8	16.3	0.70	14.3	9.81
N193	008	049	1975	11.5	12.1	2.58	14.3	9.81
N193	008	049	1975	9.6	10.0	3.58	14.3	9.81
N193	008	049	1975	8.1	8.5	4.85	14.3	9.81
N193	008	049	1975	4.2	4.4	7.15	14.3	9.81
N193	008	054	1975	13.1	14.0	0.75	12.9	9.45
N193	008	054	1975	12.3	12.9	1.40	12.9	9.45
N193	008	054	1975	11.5	11.9	2.61	12.9	9.45
N193	008	054	1975	8.0	8.2	5.54	12.9	9.45
N193	008	054	1975	6.3	6.5	6.82	12.9	9.45
N193	008	054	1975	4.3	4.5	7.89	12.9	9.45
N193	009	027	1975	11.2	12.3	0.00	9.3	6.77
N193	009	027	1975	10.0	10.8	0.70	9.3	6.77
N193	009	027	1975	8.8	9.3	1.40	9.3	6.77
N193	009	027	1975	7.1	7.5	2.22	9.3	6.77
N193	009	027	1975	5.2	5.4	4.10	9.3	6.77
N193	009	027	1975	3.6	3.8	5.22	9.3	6.77
N193	009	032	1975	11.5	12.4	0.00	10.7	8.75
N193	009	032	1975	10.7	11.6	0.77	10.7	8.75
N193	009	032	1975	9.9	10.7	1.40	10.7	8.75
N193	009	032	1975	9.1	9.5	2.22	10.7	8.75
N193	009	032	1975	8.3	8.5	3.08	10.7	8.75
N193	009	032	1975	6.1	6.3	4.50	10.7	8.75
N193	009	032	1975	3.4	3.6	6.70	10.7	8.75
N193	009	037	1975	4.2	4.4	0.00	2.4	2.56
N193	009	037	1975	2.2	2.4	1.40	2.4	2.56
N193	009	037	1975	1.4	1.6	1.95	2.4	2.56
N193	009	039	1975	7.6	8.7	0.00	4.9	3.50
N193	009	039	1975	4.5	4.9	1.40	4.9	3.50
N193	009	039	1975	3.5	3.7	1.43	4.9	3.50
N193	009	039	1975	2.4	2.6	2.62	4.9	3.50
N193	009	043	1975	10.9	12.2	0.00	9.0	6.89
N193	009	043	1975	9.7	10.6	0.70	9.0	6.89
N193	009	043	1975	8.6	9.0	1.40	9.0	6.89
N193	009	043	1975	6.9	7.1	2.43	9.0	6.89
N193	009	043	1975	4.8	5.0	4.59	9.0	6.89
N193	009	043	1975	3.0	3.2	5.34	9.0	6.89
N193	010	057	1975	4.6	5.1	0.00	3.1	2.26
N193	010	057	1975	3.7	4.1	0.70	3.1	2.26
N193	010	057	1975	2.9	3.1	1.40	3.1	2.26
N193	010	057	1975	1.6	1.8	1.76	3.1	2.26
N193	010	058	1975	4.5	4.7	0.00	3.5	3.47
N193	010	058	1975	3.9	4.1	0.72	3.5	3.47
N193	010	058	1975	3.3	3.5	1.40	3.5	3.47
N193	010	058	1975	2.0	2.2	2.47	3.5	3.47
N193	010	059	1975	10.7	11.7	0.00	9.1	6.09
N193	010	059	1975	9.6	10.4	0.70	9.1	6.09
N193	010	059	1975	7.3	7.6	2.36	9.1	6.09

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	010	059	1975	6.4	6.7	2.77	9.1	6.09
N193	010	059	1975	5.5	5.7	3.45	9.1	6.09
N193	010	059	1975	4.2	4.4	4.25	9.1	6.09
N193	010	060	1975	7.9	8.6	0.70	7.9	5.60
N193	010	060	1975	7.3	7.9	1.40	7.9	5.60
N193	010	060	1975	5.8	6.2	1.95	7.9	5.60
N193	010	060	1975	4.3	4.5	2.73	7.9	5.60
N193	010	060	1975	3.5	3.7	3.29	7.9	5.60
N193	010	061	1975	7.8	8.6	0.00	6.3	4.66
N193	010	061	1975	6.9	7.5	0.75	6.3	4.66
N193	010	061	1975	5.9	6.3	1.40	6.3	4.66
N193	010	061	1975	5.4	5.6	2.14	6.3	4.66
N193	010	061	1975	4.6	4.8	2.55	6.3	4.66
N193	011	019	1975	13.4	14.8	0.00	11.1	8.40
N193	011	019	1975	12.0	13.0	0.75	11.1	8.40
N193	011	019	1975	10.4	11.1	1.40	11.1	8.40
N193	011	019	1975	7.6	8.0	3.73	11.1	8.40
N193	011	019	1975	6.3	6.5	4.58	11.1	8.40
N193	011	019	1975	5.3	5.5	5.24	11.1	8.40
N193	011	019	1975	3.3	3.5	6.65	11.1	8.40
N193	011	022	1975	10.4	11.0	0.70	9.8	7.85
N193	011	022	1975	9.4	9.8	1.40	9.8	7.85
N193	011	022	1975	8.0	8.4	2.45	9.8	7.85
N193	011	022	1975	7.3	7.6	3.40	9.8	7.85
N193	011	022	1975	6.4	6.6	4.13	9.8	7.85
N193	011	022	1975	2.9	3.1	6.55	9.8	7.85
N193	011	035	1975	15.5	17.4	0.00	10.8	8.05
N193	011	035	1975	12.8	14.0	0.66	10.8	8.05
N193	011	035	1975	10.2	10.8	1.40	10.8	8.05
N193	011	035	1975	8.0	8.3	3.11	10.8	8.05
N193	011	035	1975	7.0	7.2	3.74	10.8	8.05
N193	011	035	1975	6.4	6.6	4.23	10.8	8.05
N193	011	035	1975	3.7	3.9	6.18	10.8	8.05
N193	011	038	1975	6.0	6.2	0.00	3.9	3.04
N193	011	038	1975	4.8	5.0	0.66	3.9	3.04
N193	011	038	1975	3.7	3.9	1.40	3.9	3.04
N193	011	038	1975	3.0	3.2	1.72	3.9	3.04
N193	011	050	1975	3.4	3.6	0.00	3.0	3.58
N193	011	050	1975	3.1	3.3	0.70	3.0	3.58
N193	011	050	1975	2.1	2.3	1.88	3.0	3.58
N193	011	050	1975	1.5	1.7	2.64	3.0	3.58
N193	012	004	1975	15.7	17.3	0.00	15.7	10.11
N193	012	004	1975	14.5	15.7	1.40	15.7	10.11
N193	012	004	1975	12.4	13.0	2.39	15.7	10.11
N193	012	004	1975	7.8	8.0	5.27	15.7	10.11
N193	012	004	1975	6.3	6.5	6.67	15.7	10.11
N193	012	004	1975	4.4	4.6	8.07	15.7	10.11
N193	012	018	1975	10.5	11.4	0.00	7.5	6.69
N193	012	018	1975	8.9	9.5	0.73	7.5	6.69
N193	012	018	1975	7.1	7.5	1.40	7.5	6.69
N193	012	018	1975	6.5	6.7	2.55	7.5	6.69
N193	012	018	1975	5.5	5.7	3.65	7.5	6.69

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	012	020	1975	15.0	16.6	0.00	14.3	9.71
N193	012	020	1975	14.2	15.5	0.74	14.3	9.71
N193	012	020	1975	13.4	14.3	1.40	14.3	9.71
N193	012	020	1975	10.0	10.4	3.84	14.3	9.71
N193	012	020	1975	5.8	6.0	6.74	14.3	9.71
N193	012	020	1975	4.7	4.9	7.69	14.3	9.71
N193	012	030	1975	5.9	6.1	0.70	5.7	5.33
N193	012	030	1975	5.5	5.7	1.40	5.7	5.33
N193	012	030	1975	5.0	5.2	2.22	5.7	5.33
N193	012	030	1975	4.1	4.3	2.99	5.7	5.33
N193	012	030	1975	2.9	3.1	3.92	5.7	5.33
N193	012	040	1975	15.8	16.7	1.40	16.7	10.21
N193	012	040	1975	12.9	13.6	2.72	16.7	10.21
N193	012	040	1975	11.3	11.9	4.04	16.7	10.21
N193	012	040	1975	10.1	10.5	5.05	16.7	10.21
N193	012	040	1975	7.6	8.0	6.20	16.7	10.21
N193	012	040	1975	6.4	6.6	7.16	16.7	10.21
N193	012	040	1975	3.8	4.0	8.64	16.7	10.21
N193	013	013	1975	15.1	17.0	0.00	15.3	11.00
N193	013	013	1975	14.8	16.1	0.63	15.3	11.00
N193	013	013	1975	12.0	12.6	2.70	15.3	11.00
N193	013	013	1975	11.8	12.0	3.55	15.3	11.00
N193	013	013	1975	9.3	9.5	5.55	15.3	11.00
N193	013	013	1975	7.4	7.6	6.55	15.3	11.00
N193	013	013	1975	5.6	5.8	8.50	15.3	11.00
N193	013	013	1975	3.3	3.5	9.65	15.3	11.00
N193	013	016	1975	7.4	7.9	0.00	7.1	7.56
N193	013	016	1975	7.2	7.5	0.70	7.1	7.56
N193	013	016	1975	6.9	7.1	1.40	7.1	7.56
N193	013	016	1975	6.6	6.8	2.44	7.1	7.56
N193	013	016	1975	4.7	4.9	4.65	7.1	7.56
N193	013	016	1975	2.5	2.7	6.81	7.1	7.56
N193	013	018	1975	4.0	4.2	0.00	4.2	6.26
N193	013	018	1975	4.0	4.2	1.40	4.2	6.26
N193	013	018	1975	3.8	4.0	2.10	4.2	6.26
N193	013	018	1975	3.7	3.9	2.75	4.2	6.26
N193	013	018	1975	3.1	3.3	3.57	4.2	6.26
N193	013	027	1975	17.0	18.7	0.00	15.9	11.23
N193	013	027	1975	16.1	17.4	0.80	15.9	11.23
N193	013	027	1975	15.0	15.9	1.40	15.9	11.23
N193	013	027	1975	11.3	11.5	4.68	15.9	11.23
N193	013	027	1975	7.9	8.1	6.65	15.9	11.23
N193	013	027	1975	6.1	6.3	7.65	15.9	11.23
N193	013	027	1975	3.4	3.6	9.45	15.9	11.23
N193	013	035	1975	17.1	19.1	0.00	16.9	9.57
N193	013	035	1975	15.8	16.9	1.40	16.9	9.57
N193	013	035	1975	11.7	11.9	4.15	16.9	9.57
N193	013	035	1975	9.3	9.5	5.44	16.9	9.57
N193	013	035	1975	6.9	7.1	6.50	16.9	9.57
N193	013	035	1975	4.9	5.1	7.73	16.9	9.57
N193	013	035	1975	2.8	3.0	8.80	16.9	9.57
N193	014	005	1975	8.1	8.7	0.00	7.3	7.15

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	014	005	1975	6.8	7.3	1.40	7.3	7.15
N193	014	005	1975	6.0	6.2	2.62	7.3	7.15
N193	014	005	1975	5.1	5.3	3.50	7.3	7.15
N193	014	005	1975	3.8	4.0	4.62	7.3	7.15
N193	014	007	1975	16.9	18.4	0.00	14.9	11.39
N193	014	007	1975	15.5	16.7	0.73	14.9	11.39
N193	014	007	1975	14.1	14.9	1.40	14.9	11.39
N193	014	007	1975	12.9	13.6	2.44	14.9	11.39
N193	014	007	1975	11.6	12.2	3.52	14.9	11.39
N193	014	007	1975	9.7	10.2	5.13	14.9	11.39
N193	014	007	1975	8.7	9.2	6.28	14.9	11.39
N193	014	007	1975	6.7	7.1	7.60	14.9	11.39
N193	014	007	1975	5.8	6.1	8.37	14.9	11.39
N193	014	007	1975	5.1	5.3	8.85	14.9	11.39
N193	014	017	1975	4.9	5.1	0.70	5.0	5.33
N193	014	017	1975	4.8	5.0	1.40	5.0	5.33
N193	014	017	1975	4.3	4.5	2.50	5.0	5.33
N193	014	017	1975	3.5	3.7	3.45	5.0	5.33
N193	014	017	1975	2.3	2.5	4.45	5.0	5.33
N193	014	025	1975	18.5	20.5	0.00	16.3	9.58
N193	014	025	1975	16.9	18.4	0.70	16.3	9.58
N193	014	025	1975	15.3	16.3	1.40	16.3	9.58
N193	014	025	1975	12.4	12.8	2.70	16.3	9.58
N193	014	025	1975	10.6	10.9	3.81	16.3	9.58
N193	014	025	1975	8.6	8.8	5.00	16.3	9.58
N193	014	025	1975	3.1	3.3	8.51	16.3	9.58
N193	014	044	1975	12.8	14.0	0.73	12.8	9.02
N193	014	044	1975	10.6	10.9	2.95	12.8	9.02
N193	014	044	1975	9.3	9.5	3.48	12.8	9.02
N193	014	044	1975	8.0	8.2	4.34	12.8	9.02
N193	014	044	1975	6.1	6.3	5.65	12.8	9.02
N193	014	044	1975	4.7	4.9	6.70	12.8	9.02
N193	015	001	1975	2.8	3.0	0.00	2.6	3.02
N193	015	001	1975	2.6	2.8	0.70	2.6	3.02
N193	015	001	1975	2.0	2.2	1.73	2.6	3.02
N193	015	001	1975	1.5	1.7	2.22	2.6	3.02
N193	015	018	1975	12.6	14.6	0.00	11.8	8.32
N193	015	018	1975	11.0	11.8	1.40	11.8	8.32
N193	015	018	1975	9.4	9.8	2.43	11.8	8.32
N193	015	018	1975	7.2	7.6	4.10	11.8	8.32
N193	015	018	1975	5.1	5.3	5.27	11.8	8.32
N193	015	018	1975	3.3	3.5	6.59	11.8	8.32
N193	015	022	1975	3.9	4.1	0.00	3.3	3.68
N193	015	022	1975	3.5	3.7	0.70	3.3	3.68
N193	015	022	1975	3.1	3.3	1.40	3.3	3.68
N193	015	022	1975	2.2	2.4	2.33	3.3	3.68
N193	015	042	1975	10.9	13.0	0.00	10.2	7.63
N193	015	042	1975	10.2	11.6	0.70	10.2	7.63
N193	015	042	1975	9.5	10.2	1.40	10.2	7.63
N193	015	042	1975	7.6	7.9	2.80	10.2	7.63
N193	015	042	1975	4.7	4.9	4.78	10.2	7.63
N193	015	042	1975	3.9	4.1	5.54	10.2	7.63

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	015	046	1975	11.3	12.8	0.00	8.8	6.87
N193	015	046	1975	9.8	10.8	0.70	8.8	6.87
N193	015	046	1975	7.0	7.2	2.43	8.8	6.87
N193	015	046	1975	5.9	6.1	3.24	8.8	6.87
N193	015	046	1975	4.8	5.0	4.36	8.8	6.87
N193	015	046	1975	3.3	3.5	5.22	8.8	6.87
N193	001	001	1979	13.1	15.0	0.00	12.4	11.70
N193	001	001	1979	12.2	13.7	0.70	12.4	11.70
N193	001	001	1979	10.8	11.4	2.30	12.4	11.70
N193	001	001	1979	9.8	10.4	3.50	12.4	11.70
N193	001	001	1979	9.0	9.4	5.20	12.4	11.70
N193	001	001	1979	7.0	7.4	7.20	12.4	11.70
N193	001	001	1979	6.0	6.4	8.10	12.4	11.70
N193	001	005	1979	16.4	20.1	0.00	16.3	12.50
N193	001	005	1979	15.3	18.2	0.70	16.3	12.50
N193	001	005	1979	14.2	16.3	1.40	16.3	12.50
N193	001	005	1979	13.0	13.8	3.25	16.3	12.50
N193	001	005	1979	10.7	11.3	5.90	16.3	12.50
N193	001	005	1979	8.4	8.8	8.55	16.3	12.50
N193	001	016	1979	20.6	24.2	0.00	19.0	13.90
N193	001	016	1979	16.6	19.0	1.50	19.0	13.90
N193	001	016	1979	15.7	16.5	3.60	19.0	13.90
N193	001	016	1979	13.4	14.0	4.70	19.0	13.90
N193	001	016	1979	10.9	11.5	7.10	19.0	13.90
N193	001	016	1979	6.1	6.5	9.35	19.0	13.90
N193	001	025	1979	10.3	12.0	0.00	11.0	9.50
N193	001	025	1979	10.1	11.5	0.70	11.0	9.50
N193	001	025	1979	9.4	10.0	3.00	11.0	9.50
N193	001	025	1979	8.6	9.0	3.70	11.0	9.50
N193	001	025	1979	7.6	8.0	5.10	11.0	9.50
N193	001	025	1979	5.6	6.0	6.60	11.0	9.50
N193	001	006	1979	15.6	18.0	0.00	15.0	14.10
N193	001	006	1979	13.6	15.0	1.40	15.0	14.10
N193	001	006	1979	13.4	14.0	3.60	15.0	14.10
N193	001	006	1979	12.4	13.0	4.80	15.0	14.10
N193	001	006	1979	11.5	12.1	5.70	15.0	14.10
N193	001	006	1979	10.4	11.0	6.50	15.0	14.10
N193	001	006	1979	9.8	10.2	7.35	15.0	14.10
N193	001	006	1979	8.5	8.9	8.10	15.0	14.10
N193	002	003	1979	13.3	15.2	0.00	13.2	8.00
N193	002	003	1979	12.1	13.2	1.40	13.2	8.00
N193	002	003	1979	11.0	11.6	1.80	13.2	8.00
N193	002	003	1979	10.2	10.8	2.40	13.2	8.00
N193	002	003	1979	9.8	10.2	2.70	13.2	8.00
N193	002	003	1979	6.7	7.1	4.80	13.2	8.00
N193	002	003	1979	5.7	6.1	5.40	13.2	8.00
N193	002	011	1979	11.9	13.4	0.00	12.8	8.30
N193	002	011	1979	11.0	11.8	2.00	12.8	8.30
N193	002	011	1979	10.2	10.8	3.50	12.8	8.30
N193	002	011	1979	9.2	9.8	4.00	12.8	8.30
N193	002	011	1979	8.4	8.8	4.40	12.8	8.30
N193	002	011	1979	7.4	7.8	5.30	12.8	8.30

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	002	008	1979	7.8	8.7	0.00	7.5	5.60
N193	002	008	1979	7.3	8.1	0.70	7.5	5.60
N193	002	008	1979	6.8	7.5	1.40	7.5	5.60
N193	002	008	1979	6.0	6.4	1.70	7.5	5.60
N193	002	008	1979	5.2	5.6	2.40	7.5	5.60
N193	002	009	1979	7.6	9.0	0.00	7.8	7.00
N193	002	009	1979	7.3	8.4	0.70	7.8	7.00
N193	002	009	1979	7.0	7.8	1.40	7.8	7.00
N193	002	009	1979	6.2	6.8	2.20	7.8	7.00
N193	002	009	1979	5.3	5.7	3.30	7.8	7.00
N193	002	021	1979	10.0	12.0	0.00	9.8	7.50
N193	002	021	1979	9.5	10.9	0.70	9.8	7.50
N193	002	021	1979	8.4	8.8	2.60	9.8	7.50
N193	002	021	1979	7.6	8.0	3.40	9.8	7.50
N193	002	021	1979	6.4	6.8	4.50	9.8	7.50
N193	002	021	1979	5.4	5.8	5.10	9.8	7.50
N193	003	019	1979	17.1	18.9	0.00	17.7	15.50
N193	003	019	1979	16.4	17.7	1.10	17.7	15.50
N193	003	019	1979	13.4	14.2	4.50	17.7	15.50
N193	003	019	1979	8.8	9.2	10.00	17.7	15.50
N193	003	019	1979	6.6	7.0	11.90	17.7	15.50
N193	003	019	1979	3.8	4.2	13.90	17.7	15.50
N193	003	012	1979	16.3	18.0	0.70	16.6	15.80
N193	003	012	1979	15.2	16.6	1.40	16.6	15.80
N193	003	012	1979	13.3	14.1	4.20	16.6	15.80
N193	003	012	1979	11.0	11.6	7.30	16.6	15.80
N193	003	012	1979	8.6	9.0	10.10	16.6	15.80
N193	003	012	1979	6.2	6.6	12.80	16.6	15.80
N193	003	015	1979	21.8	26.2	0.00	22.2	17.30
N193	003	015	1979	20.6	24.2	0.70	22.2	17.30
N193	003	015	1979	19.4	22.2	1.40	22.2	17.30
N193	003	015	1979	17.9	19.7	2.95	22.2	17.30
N193	003	015	1979	15.9	17.1	5.40	22.2	17.30
N193	003	015	1979	11.2	12.2	10.00	22.2	17.30
N193	003	015	1979	8.9	9.7	11.60	22.2	17.30
N193	003	015	1979	5.8	6.2	14.30	22.2	17.30
N193	003	025	1979	20.9	24.0	0.70	21.9	18.00
N193	003	025	1979	18.2	19.4	3.10	21.9	18.00
N193	003	025	1979	16.0	16.9	6.50	21.9	18.00
N193	003	025	1979	13.8	14.4	9.10	21.9	18.00
N193	003	025	1979	11.3	11.9	11.20	21.9	18.00
N193	003	025	1979	8.8	9.4	13.10	21.9	18.00
N193	003	025	1979	6.5	6.9	14.30	21.9	18.00
N193	003	009	1979	20.1	23.4	0.00	19.6	16.10
N193	003	009	1979	19.1	21.5	0.70	19.6	16.10
N193	003	009	1979	18.1	19.6	1.40	19.6	16.10
N193	003	009	1979	16.1	17.1	3.10	19.6	16.10
N193	003	009	1979	13.8	14.6	5.60	19.6	16.10
N193	003	009	1979	11.5	12.1	7.70	19.6	16.10
N193	003	009	1979	6.7	7.1	11.50	19.6	16.10
N193	004	013	1979	13.8	16.0	0.00	15.2	11.25
N193	004	013	1979	13.8	15.6	0.70	15.2	11.25

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	004	013	1979	13.8	15.2	1.40	15.2	11.25
N193	004	013	1979	11.9	12.7	3.35	15.2	11.25
N193	004	013	1979	9.6	10.2	5.20	15.2	11.25
N193	004	013	1979	7.3	7.7	7.25	15.2	11.25
N193	004	010	1979	13.4	15.1	0.70	13.7	9.50
N193	004	010	1979	12.3	13.7	1.40	13.7	9.50
N193	004	010	1979	11.9	12.7	2.30	13.7	9.50
N193	004	010	1979	10.6	11.4	3.30	13.7	9.50
N193	004	010	1979	10.1	10.7	3.90	13.7	9.50
N193	004	010	1979	9.1	9.7	4.90	13.7	9.50
N193	004	010	1979	7.4	7.8	6.40	13.7	9.50
N193	004	010	1979	6.2	6.6	6.70	13.7	9.50
N193	004	019	1979	9.0	9.8	0.00	8.4	7.10
N193	004	019	1979	7.6	8.4	1.40	8.4	7.10
N193	004	019	1979	7.0	7.4	2.80	8.4	7.10
N193	004	019	1979	6.0	6.4	3.50	8.4	7.10
N193	004	019	1979	5.0	5.4	4.60	8.4	7.10
N193	004	021	1979	11.4	13.9	0.00	10.6	9.00
N193	004	021	1979	10.4	12.3	0.75	10.6	9.00
N193	004	021	1979	9.3	10.6	1.40	10.6	9.00
N193	004	021	1979	8.9	9.5	2.10	10.6	9.00
N193	004	021	1979	8.0	8.6	2.80	10.6	9.00
N193	004	021	1979	6.2	6.6	4.60	10.6	9.00
N193	004	025	1979	9.0	9.8	0.00	8.4	5.75
N193	004	025	1979	8.4	9.1	0.70	8.4	5.75
N193	004	025	1979	7.8	8.4	1.40	8.4	5.75
N193	004	025	1979	7.0	7.4	2.75	8.4	5.75
N193	004	025	1979	4.9	5.3	5.20	8.4	5.75
N193	005	014	1979	10.5	11.8	0.00	10.4	9.90
N193	005	014	1979	9.9	11.1	0.70	10.4	9.90
N193	005	014	1979	9.0	9.4	2.60	10.4	9.90
N193	005	014	1979	8.0	8.4	3.50	10.4	9.90
N193	005	014	1979	7.0	7.4	4.65	10.4	9.90
N193	005	014	1979	6.0	6.4	5.80	10.4	9.90
N193	005	025	1979	11.8	13.4	0.70	12.2	11.50
N193	005	025	1979	11.1	12.2	1.40	12.2	11.50
N193	005	025	1979	10.6	11.2	2.70	12.2	11.50
N193	005	025	1979	8.5	8.9	4.80	12.2	11.50
N193	005	025	1979	7.8	8.2	5.90	12.2	11.50
N193	005	025	1979	6.8	7.2	6.50	12.2	11.50
N193	005	025	1979	5.8	6.2	6.80	12.2	11.50
N193	005	017	1979	15.4	17.0	0.70	15.7	15.25
N193	005	017	1979	14.5	15.7	1.40	15.7	15.25
N193	005	017	1979	12.2	13.2	4.75	15.7	15.25
N193	005	017	1979	9.9	10.7	7.60	15.7	15.25
N193	005	017	1979	7.8	8.2	10.00	15.7	15.25
N193	005	017	1979	5.3	5.7	11.90	15.7	15.25
N193	005	010	1979	10.6	12.5	0.00	10.5	10.35
N193	005	010	1979	10.1	11.5	0.70	10.5	10.35
N193	005	010	1979	9.6	10.5	1.40	10.5	10.35
N193	005	010	1979	8.3	8.7	3.40	10.5	10.35
N193	005	010	1979	7.1	7.5	4.70	10.5	10.35

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	005	010	1979	6.1	6.5	5.80	10.5	10.35
N193	005	005	1979	14.1	15.6	0.00	14.8	12.40
N193	005	005	1979	13.8	15.2	0.70	14.8	12.40
N193	005	005	1979	13.5	14.8	1.40	14.8	12.40
N193	005	005	1979	13.2	13.8	2.25	14.8	12.40
N193	005	005	1979	12.2	12.8	3.65	14.8	12.40
N193	005	005	1979	10.5	10.9	5.40	14.8	12.40
N193	005	005	1979	8.1	8.5	7.20	14.8	12.40
N193	005	005	1979	6.0	6.4	8.90	14.8	12.40
N193	006	013	1979	20.2	23.1	0.70	21.1	17.20
N193	006	013	1979	19.5	21.1	1.40	21.1	17.20
N193	006	013	1979	15.3	16.1	5.70	21.1	17.20
N193	006	013	1979	13.2	13.8	8.40	21.1	17.20
N193	006	013	1979	10.7	11.1	10.60	21.1	17.20
N193	006	013	1979	8.2	8.6	12.50	21.1	17.20
N193	006	013	1979	6.0	6.4	13.70	21.1	17.20
N193	006	028	1979	21.9	25.0	0.00	19.2	16.35
N193	006	028	1979	17.9	19.2	1.40	19.2	16.35
N193	006	028	1979	16.3	16.9	3.75	19.2	16.35
N193	006	028	1979	11.3	11.7	9.25	19.2	16.35
N193	006	028	1979	8.8	9.2	11.80	19.2	16.35
N193	006	028	1979	6.4	6.8	13.15	19.2	16.35
N193	006	016	1979	17.0	20.3	0.00	17.0	16.40
N193	006	016	1979	15.1	17.0	1.40	17.0	16.40
N193	006	016	1979	13.7	14.5	2.65	17.0	16.40
N193	006	016	1979	11.6	12.0	6.90	17.0	16.40
N193	006	016	1979	9.1	9.5	10.10	17.0	16.40
N193	006	016	1979	5.1	5.5	14.35	17.0	16.40
N193	006	022	1979	19.0	22.0	0.00	16.8	14.75
N193	006	022	1979	17.0	19.3	0.65	16.8	14.75
N193	006	022	1979	13.4	14.2	4.40	16.8	14.75
N193	006	022	1979	11.2	11.8	6.70	16.8	14.75
N193	006	022	1979	9.3	9.7	9.30	16.8	14.75
N193	006	022	1979	6.4	6.8	11.35	16.8	14.75
N193	006	025	1979	21.3	24.3	0.00	21.0	17.00
N193	006	025	1979	19.4	21.0	1.40	21.0	17.00
N193	006	025	1979	17.6	18.2	3.80	21.0	17.00
N193	006	025	1979	15.4	16.0	6.90	21.0	17.00
N193	006	025	1979	13.1	13.5	9.15	21.0	17.00
N193	006	025	1979	8.3	8.7	12.75	21.0	17.00
N193	006	025	1979	5.8	6.2	14.30	21.0	17.00
N193	007	008	1979	18.1	20.5	0.00	17.5	12.00
N193	007	008	1979	16.7	19.0	0.70	17.5	12.00
N193	007	008	1979	15.3	17.5	1.40	17.5	12.00
N193	007	008	1979	14.2	15.0	3.50	17.5	12.00
N193	007	008	1979	11.8	12.4	5.60	17.5	12.00
N193	007	008	1979	7.1	7.5	8.40	17.5	12.00
N193	007	002	1979	13.8	16.2	0.70	15.5	13.50
N193	007	002	1979	13.6	15.5	1.40	15.5	13.50
N193	007	002	1979	12.4	13.0	3.00	15.5	13.50
N193	007	002	1979	10.4	10.8	5.85	15.5	13.50
N193	007	002	1979	7.7	8.1	8.30	15.5	13.50

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	007	002	1979	5.1	5.5	10.40	15.5	13.50
N193	007	006	1979	10.1	11.3	0.70	10.6	8.80
N193	007	006	1979	9.5	10.6	1.40	10.6	8.80
N193	007	006	1979	8.9	9.5	2.05	10.6	8.80
N193	007	006	1979	8.0	8.6	3.05	10.6	8.80
N193	007	006	1979	7.2	7.6	4.20	10.6	8.80
N193	007	006	1979	6.2	6.6	5.00	10.6	8.80
N193	007	001	1979	8.1	9.3	0.00	8.7	8.60
N193	007	001	1979	8.0	9.0	0.70	8.7	8.60
N193	007	001	1979	7.3	7.7	2.65	8.7	8.60
N193	007	001	1979	6.3	6.7	4.10	8.7	8.60
N193	007	001	1979	5.3	5.7	5.00	8.7	8.60
N193	007	014	1979	8.2	9.2	0.70	8.8	7.05
N193	007	014	1979	8.0	8.8	1.40	8.8	7.05
N193	007	014	1979	7.4	7.8	2.05	8.8	7.05
N193	007	014	1979	6.6	7.0	3.10	8.8	7.05
N193	007	014	1979	5.4	5.8	3.85	8.8	7.05
N193	008	001	1979	25.0	27.9	0.70	24.5	15.10
N193	008	001	1979	21.2	22.0	2.65	24.5	15.10
N193	008	001	1979	18.9	19.5	4.50	24.5	15.10
N193	008	001	1979	16.4	17.0	6.00	24.5	15.10
N193	008	001	1979	14.1	14.5	7.40	24.5	15.10
N193	008	001	1979	11.6	12.0	9.20	24.5	15.10
N193	008	001	1979	9.1	9.5	9.95	24.5	15.10
N193	008	001	1979	6.6	7.0	12.00	24.5	15.10
N193	008	001	1979	5.5	5.9	12.80	24.5	15.10
N193	008	009	1979	18.5	21.0	0.70	18.7	13.95
N193	008	009	1979	15.4	16.2	3.20	18.7	13.95
N193	008	009	1979	13.1	13.7	5.70	18.7	13.95
N193	008	009	1979	9.7	10.2	8.30	18.7	13.95
N193	008	009	1979	7.3	7.7	9.80	18.7	13.95
N193	008	009	1979	4.8	5.2	11.35	18.7	13.95
N193	008	018	1979	17.6	21.8	0.00	17.0	15.10
N193	008	018	1979	16.3	19.4	0.70	17.0	15.10
N193	008	018	1979	15.0	17.0	1.40	17.0	15.10
N193	008	018	1979	11.6	12.2	7.45	17.0	15.10
N193	008	018	1979	9.1	9.5	9.95	17.0	15.10
N193	008	018	1979	7.0	7.4	11.80	17.0	15.10
N193	008	002	1979	19.7	22.8	0.00	20.2	12.70
N193	008	002	1979	18.3	20.2	1.40	20.2	12.70
N193	008	002	1979	16.5	17.5	2.95	20.2	12.70
N193	008	002	1979	14.5	15.2	4.60	20.2	12.70
N193	008	002	1979	11.3	11.9	6.00	20.2	12.70
N193	008	002	1979	10.3	10.9	7.00	20.2	12.70
N193	008	002	1979	5.2	5.6	9.65	20.2	12.70
N193	008	014	1979	27.2	30.9	0.00	26.1	12.90
N193	008	014	1979	25.0	28.5	0.70	26.1	12.90
N193	008	014	1979	22.8	26.1	1.40	26.1	12.90
N193	008	014	1979	22.5	23.5	2.60	26.1	12.90
N193	008	014	1979	17.6	18.6	6.00	26.1	12.90
N193	008	014	1979	15.8	16.6	7.30	26.1	12.90
N193	008	014	1979	12.9	13.6	7.90	26.1	12.90

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	008	014	1979	10.5	11.1	8.60	26.1	12.90
N193	008	014	1979	8.0	8.6	9.40	26.1	12.90
N193	009	006	1979	22.2	24.2	0.70	21.9	15.90
N193	009	006	1979	20.4	21.9	1.40	21.9	15.90
N193	009	006	1979	18.4	19.5	3.05	21.9	15.90
N193	009	006	1979	16.7	17.8	5.40	21.9	15.90
N193	009	006	1979	13.5	14.4	7.70	21.9	15.90
N193	009	006	1979	11.2	11.9	8.80	21.9	15.90
N193	009	006	1979	9.1	9.7	10.40	21.9	15.90
N193	009	027	1979	11.1	12.8	0.00	12.4	13.30
N193	009	027	1979	11.2	12.6	0.70	12.4	13.30
N193	009	027	1979	11.3	12.4	1.40	12.4	13.30
N193	009	027	1979	10.7	11.3	3.85	12.4	13.30
N193	009	027	1979	9.7	10.4	4.80	12.4	13.30
N193	009	027	1979	8.8	9.4	6.50	12.4	13.30
N193	009	027	1979	5.8	6.4	9.35	12.4	13.30
N193	009	027	1979	5.0	5.4	10.30	12.4	13.30
N193	009	019	1979	18.2	21.5	0.70	20.0	14.90
N193	009	019	1979	17.5	20.0	1.40	20.0	14.90
N193	009	019	1979	15.8	17.7	2.70	20.0	14.90
N193	009	019	1979	13.8	15.0	4.05	20.0	14.90
N193	009	019	1979	11.8	12.5	6.40	20.0	14.90
N193	009	019	1979	7.2	7.8	10.80	20.0	14.90
N193	009	015	1979	12.5	15.8	0.00	13.2	10.65
N193	009	015	1979	12.0	14.5	0.70	13.2	10.65
N193	009	015	1979	11.5	13.2	1.40	13.2	10.65
N193	009	015	1979	10.4	11.4	2.60	13.2	10.65
N193	009	015	1979	9.2	10.2	3.10	13.2	10.65
N193	009	015	1979	8.5	9.2	4.25	13.2	10.65
N193	009	015	1979	7.5	8.2	4.85	13.2	10.65
N193	009	015	1979	5.8	6.2	6.75	13.2	10.65
N193	009	011	1979	19.5	23.7	0.00	17.7	13.80
N193	009	011	1979	17.5	20.7	0.70	17.7	13.80
N193	009	011	1979	14.0	15.2	2.60	17.7	13.80
N193	009	011	1979	11.7	12.5	4.90	17.7	13.80
N193	009	011	1979	10.1	10.9	6.60	17.7	13.80
N193	009	011	1979	4.8	5.2	10.90	17.7	13.80
N193	010	006	1979	16.0	18.6	0.00	16.4	9.20
N193	010	006	1979	14.5	16.4	1.40	16.4	9.20
N193	010	006	1979	11.7	12.7	2.70	16.4	9.20
N193	010	006	1979	9.6	10.4	4.60	16.4	9.20
N193	010	006	1979	6.9	7.5	5.70	16.4	9.20
N193	010	006	1979	5.0	5.4	7.25	16.4	9.20
N193	010	011	1979	14.9	17.6	0.00	16.0	8.40
N193	010	011	1979	14.7	16.0	1.40	16.0	8.40
N193	010	011	1979	13.5	14.4	2.90	16.0	8.40
N193	010	011	1979	10.4	11.0	4.30	16.0	8.40
N193	010	011	1979	8.3	8.9	5.20	16.0	8.40
N193	010	011	1979	5.4	6.0	5.80	16.0	8.40
N193	010	003	1979	9.3	11.0	0.00	8.0	4.80
N193	010	003	1979	7.1	8.0	1.40	8.0	4.80
N193	010	003	1979	6.3	6.9	1.90	8.0	4.80

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	010	003	1979	5.4	5.8	2.60	8.0	4.80
N193	010	005	1979	8.8	11.6	0.00	8.4	5.70
N193	010	005	1979	8.1	10.0	0.70	8.4	5.70
N193	010	005	1979	6.6	7.3	1.90	8.4	5.70
N193	010	005	1979	5.7	6.3	2.60	8.4	5.70
N193	010	005	1979	4.9	5.3	3.30	8.4	5.70
N193	010	004	1979	10.4	12.4	0.70	11.5	4.75
N193	010	004	1979	9.9	11.5	1.40	11.5	4.75
N193	010	004	1979	7.5	8.2	1.95	11.5	4.75
N193	010	004	1979	6.4	7.0	2.35	11.5	4.75
N193	011	008	1979	11.5	13.0	0.00	11.9	9.70
N193	011	008	1979	11.2	12.5	0.80	11.9	9.70
N193	011	008	1979	10.9	11.9	1.40	11.9	9.70
N193	011	008	1979	9.9	10.7	2.80	11.9	9.70
N193	011	008	1979	8.8	9.4	3.80	11.9	9.70
N193	011	008	1979	7.9	8.5	4.70	11.9	9.70
N193	011	017	1979	11.6	12.5	0.00	11.3	9.80
N193	011	017	1979	10.4	11.3	1.40	11.3	9.80
N193	011	017	1979	9.6	10.2	2.70	11.3	9.80
N193	011	017	1979	8.5	9.3	3.70	11.3	9.80
N193	011	017	1979	7.6	8.2	4.40	11.3	9.80
N193	011	017	1979	6.9	7.3	5.30	11.3	9.80
N193	011	003	1979	7.5	8.3	0.00	7.7	6.50
N193	011	003	1979	7.3	8.0	0.70	7.7	6.50
N193	011	003	1979	6.2	6.7	2.30	7.7	6.50
N193	011	003	1979	5.3	5.7	2.90	7.7	6.50
N193	011	003	1979	4.3	4.8	3.60	7.7	6.50
N193	011	015	1979	7.4	8.3	0.00	7.9	7.50
N193	011	015	1979	7.4	8.1	0.70	7.9	7.50
N193	011	015	1979	6.3	6.9	2.40	7.9	7.50
N193	011	015	1979	5.7	5.9	3.60	7.9	7.50
N193	011	015	1979	4.8	5.0	4.10	7.9	7.50
N193	011	024	1979	8.7	10.5	0.00	9.3	5.50
N193	011	024	1979	8.6	9.9	0.70	9.3	5.50
N193	011	024	1979	8.5	9.3	1.40	9.3	5.50
N193	011	024	1979	7.8	8.4	1.80	9.3	5.50
N193	011	024	1979	6.7	7.3	2.70	9.3	5.50
N193	011	024	1979	4.8	5.2	4.10	9.3	5.50
N193	012	009	1979	22.4	26.6	0.70	23.5	16.00
N193	012	009	1979	20.6	23.5	1.40	23.5	16.00
N193	012	009	1979	16.9	17.8	5.30	23.5	16.00
N193	012	009	1979	15.1	16.0	7.25	23.5	16.00
N193	012	009	1979	12.9	13.5	9.50	23.5	16.00
N193	012	009	1979	10.8	11.2	10.40	23.5	16.00
N193	012	009	1979	8.1	8.5	11.00	23.5	16.00
N193	012	009	1979	5.5	5.9	13.25	23.5	16.00
N193	012	013	1979	24.0	27.5	0.00	23.7	15.10
N193	012	013	1979	22.7	25.6	0.70	23.7	15.10
N193	012	013	1979	21.4	23.7	1.40	23.7	15.10
N193	012	013	1979	17.2	18.0	4.60	23.7	15.10
N193	012	013	1979	13.1	13.7	8.40	23.7	15.10
N193	012	013	1979	10.1	10.5	10.20	23.7	15.10

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	012	013	1979	8.3	8.7	11.35	23.7	15.10
N193	012	013	1979	5.6	6.1	13.30	23.7	15.10
N193	012	001	1979	17.2	20.7	0.00	17.7	16.10
N193	012	001	1979	15.7	17.7	1.40	17.7	16.10
N193	012	001	1979	14.5	15.0	4.20	17.7	16.10
N193	012	001	1979	12.1	12.7	6.85	17.7	16.10
N193	012	001	1979	9.8	10.4	9.20	17.7	16.10
N193	012	001	1979	4.6	5.0	13.30	17.7	16.10
N193	012	006	1979	19.6	21.4	0.00	18.6	14.60
N193	012	006	1979	17.8	18.6	1.40	18.6	14.60
N193	012	006	1979	15.6	16.1	3.70	18.6	14.60
N193	012	006	1979	12.3	12.8	6.70	18.6	14.60
N193	012	006	1979	10.5	11.1	8.70	18.6	14.60
N193	012	006	1979	8.2	8.6	10.90	18.6	14.60
N193	012	002	1979	21.2	24.4	0.00	20.6	14.10
N193	012	002	1979	19.9	22.5	0.70	20.6	14.10
N193	012	002	1979	18.6	20.6	1.40	20.6	14.10
N193	012	002	1979	17.4	18.7	2.80	20.6	14.10
N193	012	002	1979	12.4	13.0	7.50	20.6	14.10
N193	012	002	1979	7.8	8.3	10.50	20.6	14.10
N193	012	002	1979	3.1	3.5	12.10	20.6	14.10
N193	013	003	1979	28.9	33.2	0.00	28.4	17.90
N193	013	003	1979	27.6	30.8	0.70	28.4	17.90
N193	013	003	1979	26.3	28.4	1.40	28.4	17.90
N193	013	003	1979	24.6	26.0	2.20	28.4	17.90
N193	013	003	1979	18.8	19.8	5.80	28.4	17.90
N193	013	003	1979	16.4	16.9	7.70	28.4	17.90
N193	013	003	1979	14.3	14.9	9.10	28.4	17.90
N193	013	003	1979	11.6	12.0	10.70	28.4	17.90
N193	013	003	1979	6.8	7.2	13.40	28.4	17.90
N193	013	007	1979	27.1	32.4	0.00	27.0	16.30
N193	013	007	1979	25.9	29.7	0.70	27.0	16.30
N193	013	007	1979	24.7	27.0	1.40	27.0	16.30
N193	013	007	1979	23.1	24.4	2.80	27.0	16.30
N193	013	007	1979	21.5	22.5	3.90	27.0	16.30
N193	013	007	1979	18.7	19.5	5.70	27.0	16.30
N193	013	007	1979	16.5	17.0	7.50	27.0	16.30
N193	013	007	1979	8.9	9.5	11.80	27.0	16.30
N193	013	007	1979	6.6	7.0	13.10	27.0	16.30
N193	013	007	1979	4.4	4.8	14.65	27.0	16.30
N193	013	018	1979	20.6	22.5	0.00	18.3	16.50
N193	013	018	1979	18.9	20.4	0.70	18.3	16.50
N193	013	018	1979	14.9	15.7	4.80	18.3	16.50
N193	013	018	1979	12.8	13.4	6.80	18.3	16.50
N193	013	018	1979	7.7	8.2	11.20	18.3	16.50
N193	013	018	1979	5.4	5.8	13.20	18.3	16.50
N193	013	017	1979	20.3	22.5	0.00	18.0	15.70
N193	013	017	1979	18.6	20.4	0.80	18.0	15.70
N193	013	017	1979	16.6	18.0	1.40	18.0	15.70
N193	013	017	1979	14.8	15.4	3.80	18.0	15.70
N193	013	017	1979	9.9	10.5	8.45	18.0	15.70
N193	013	017	1979	5.0	5.5	13.40	18.0	15.70

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	013	011	1979	22.3	26.2	0.00	21.0	18.00
N193	013	011	1979	20.8	23.6	0.70	21.0	18.00
N193	013	011	1979	19.3	21.0	1.40	21.0	18.00
N193	013	011	1979	17.9	18.9	3.60	21.0	18.00
N193	013	011	1979	15.0	15.9	7.30	21.0	18.00
N193	013	011	1979	10.4	11.0	10.80	21.0	18.00
N193	013	011	1979	7.7	8.3	12.70	21.0	18.00
N193	014	021	1979	26.9	30.2	0.00	26.0	18.50
N193	014	021	1979	25.3	28.1	0.70	26.0	18.50
N193	014	021	1979	23.7	26.0	1.40	26.0	18.50
N193	014	021	1979	21.5	23.5	3.00	26.0	18.50
N193	014	021	1979	16.9	18.0	7.00	26.0	18.50
N193	014	021	1979	15.5	16.5	8.60	26.0	18.50
N193	014	021	1979	10.4	11.0	11.70	26.0	18.50
N193	014	021	1979	7.9	8.5	13.65	26.0	18.50
N193	014	021	1979	5.6	6.0	15.30	26.0	18.50
N193	014	023	1979	22.2	25.4	0.70	23.6	17.30
N193	014	023	1979	21.7	23.6	1.40	23.6	17.30
N193	014	023	1979	19.6	21.1	2.70	23.6	17.30
N193	014	023	1979	17.4	18.6	4.40	23.6	17.30
N193	014	023	1979	15.7	16.6	5.44	23.6	17.30
N193	014	023	1979	10.0	11.0	10.60	23.6	17.30
N193	014	023	1979	7.9	8.6	12.40	23.6	17.30
N193	014	023	1979	5.5	6.1	14.10	23.6	17.30
N193	014	003	1979	17.9	21.9	0.00	16.9	14.30
N193	014	003	1979	15.1	16.9	1.40	16.9	14.30
N193	014	003	1979	13.4	14.2	3.75	16.9	14.30
N193	014	003	1979	11.3	12.0	5.65	16.9	14.30
N193	014	003	1979	8.8	9.4	8.00	16.9	14.30
N193	014	003	1979	4.0	4.4	11.80	16.9	14.30
N193	014	018	1979	17.3	20.4	0.00	17.0	15.70
N193	014	018	1979	16.3	18.7	0.70	17.0	15.70
N193	014	018	1979	15.3	17.0	1.40	17.0	15.70
N193	014	018	1979	13.9	14.7	5.10	17.0	15.70
N193	014	018	1979	8.9	9.5	10.70	17.0	15.70
N193	014	018	1979	6.4	7.0	12.80	17.0	15.70
N193	014	014	1979	19.0	21.8	0.00	20.3	15.90
N193	014	014	1979	18.8	21.1	0.80	20.3	15.90
N193	014	014	1979	18.6	20.3	1.40	20.3	15.90
N193	014	014	1979	16.8	17.8	3.80	20.3	15.90
N193	014	014	1979	14.2	15.4	6.60	20.3	15.90
N193	014	014	1979	9.7	10.3	11.20	20.3	15.90
N193	015	001	1979	17.4	21.2	0.00	16.4	12.70
N193	015	001	1979	15.9	18.8	0.70	16.4	12.70
N193	015	001	1979	14.4	16.4	1.40	16.4	12.70
N193	015	001	1979	10.7	11.5	6.00	16.4	12.70
N193	015	001	1979	8.3	8.9	8.10	16.4	12.70
N193	015	001	1979	5.8	6.4	9.80	16.4	12.70
N193	015	028	1979	16.6	19.4	0.70	16.2	10.20
N193	015	028	1979	14.6	16.2	1.40	16.2	10.20
N193	015	028	1979	12.6	13.5	3.80	16.2	10.20
N193	015	028	1979	10.8	11.5	5.55	16.2	10.20

Appendix 17. Sectional measurement data for Motueka.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	015	028	1979	7.3	7.8	8.00	16.2	10.20
N193	015	028	1979	5.8	6.2	9.40	16.2	10.20
N193	015	011	1979	9.3	10.6	0.70	10.0	10.20
N193	015	011	1979	9.0	10.0	1.40	10.0	10.20
N193	015	011	1979	8.4	9.0	2.70	10.0	10.20
N193	015	011	1979	7.4	8.0	4.20	10.0	10.20
N193	015	011	1979	6.5	7.0	5.60	10.0	10.20
N193	015	011	1979	5.5	5.9	6.80	10.0	10.20
N193	015	019	1979	9.2	11.5	0.00	10.1	8.80
N193	015	019	1979	9.0	10.8	0.70	10.1	8.80
N193	015	019	1979	8.8	10.1	1.40	10.1	8.80
N193	015	019	1979	7.4	8.0	3.30	10.1	8.80
N193	015	019	1979	6.4	7.0	3.90	10.1	8.80
N193	015	019	1979	4.6	5.0	5.60	10.1	8.80
N193	015	012	1979	14.0	15.8	0.00	14.3	11.70
N193	015	012	1979	13.7	15.1	0.80	14.3	11.70
N193	015	012	1979	13.3	14.3	1.40	14.3	11.70
N193	015	012	1979	13.0	13.7	2.60	14.3	11.70
N193	015	012	1979	9.5	10.3	5.50	14.3	11.70
N193	015	012	1979	8.6	9.2	6.40	14.3	11.70
N193	015	012	1979	7.8	8.4	7.70	14.3	11.70
N193	015	012	1979	6.4	7.0	8.00	14.3	11.70
N193	015	012	1979	5.9	6.3	8.65	14.3	11.70
N193	015	012	1979	4.9	5.3	9.50	14.3	11.70

Appendix 17. Sectional measurement data for Motueka.
(20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	002	005	1975	7.6	8.2	0.70	6.8	5.89
N195	002	018	1975	12.2	13.1	1.40	13.1	8.25
N195	002	023	1975	4.5	4.7	3.19	6.0	6.35
N195	002	032	1975	6.6	7.0	4.56	14.8	7.62
N195	002	039	1975	12.3	13.0	0.75	12.4	9.20
N195	002	039	1975	7.5	8.0	5.33	12.4	9.20
N195	003	010	1975	3.1	3.3	1.40	3.3	3.12
N195	003	015	1975	8.8	9.4	1.40	9.4	5.65
N195	003	016	1975	1.3	1.5	1.90	2.5	2.32
N195	003	046	1975	11.9	12.9	1.40	12.9	8.75
N195	003	046	1975	3.2	3.6	7.22	12.9	8.75
N195	003	059	1975	8.4	9.2	2.28	10.2	7.11
N195	010	003	1975	3.3	3.5	0.00	2.5	2.50
N195	010	013	1975	2.3	2.5	2.39	3.8	3.41
N195	010	037	1975	6.6	7.0	2.41	8.5	6.22
N195	010	040	1975	13.1	14.6	0.00	9.2	6.32
N195	010	048	1975	12.9	14.0	0.00	10.2	7.16
N195	011	008	1975	5.3	5.5	0.00	4.5	4.42
N195	011	013	1975	6.4	6.6	4.84	12.0	7.62
N195	011	030	1975	5.3	5.6	0.70	4.7	4.05
N195	011	040	1975	9.9	10.8	1.40	10.8	6.62
N195	011	057	1975	7.0	7.5	3.21	11.5	6.95
N195	019	001	1975	10.0	10.5	1.40	10.5	7.01
N195	019	001	1975	2.9	3.1	6.02	10.5	7.01
N195	019	005	1975	6.5	6.9	4.62	11.3	8.58
N195	019	005	1975	3.8	4.0	6.49	11.3	8.58
N195	019	011	1975	2.4	2.6	2.66	3.3	3.26
N195	019	018	1975	9.7	10.3	0.60	9.0	7.24
N195	019	018	1975	8.2	8.4	2.30	9.0	7.24
N195	019	043	1975	1.7	1.9	1.96	2.6	2.68
N195	020	015	1975	13.9	14.8	1.40	14.8	9.10
N195	020	015	1975	9.6	10.0	4.00	14.8	9.10
N195	020	024	1975	4.9	5.1	0.00	4.7	5.00
N195	020	032	1975	11.6	12.0	1.40	12.0	9.30
N195	020	032	1975	5.2	5.4	6.85	12.0	9.30
N195	020	037	1975	7.2	7.6	1.40	7.6	6.55
N195	020	048	1975	8.4	9.0	4.75	13.7	9.49
N195	020	048	1975	7.3	7.7	5.62	13.7	9.49
N195	002	017	1979	25.1	28.5	0.70	26.0	18.10
N195	002	017	1979	22.2	23.4	2.70	26.0	18.10
N195	002	019	1979	24.1	27.1	0.70	24.5	15.80
N195	002	019	1979	8.7	9.3	11.60	24.5	15.80
N195	002	010	1979	14.6	15.9	1.40	15.9	14.40
N195	002	010	1979	11.5	12.1	5.10	15.9	14.40
N195	002	012	1979	12.9	13.7	4.00	16.3	15.50
N195	002	014	1979	19.1	21.5	0.70	19.8	15.00
N195	002	014	1979	6.8	7.4	12.10	19.8	15.00
N195	002	013	1979	6.4	7.0	11.20	17.0	14.80
N195	003	021	1979	18.0	20.8	0.70	17.1	13.10
N195	003	023	1979	10.2	11.6	1.40	11.6	11.00
N195	003	023	1979	8.0	8.6	4.80	11.6	11.00
N195	003	026	1979	10.3	11.8	0.80	11.4	12.70

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N195	003	026	1979	10.3	11.4	1.40	11.4	12.70
N195	003	017	1979	9.3	10.1	5.60	14.5	12.70
N195	003	017	1979	6.9	7.5	8.20	14.5	12.70
N195	010	003	1979	19.1	22.4	0.00	18.6	14.50
N195	010	003	1979	5.2	6.0	12.00	18.6	14.50
N195	010	020	1979	19.9	24.1	0.00	21.5	15.20
N195	010	020	1979	19.4	22.8	0.70	21.5	15.20
N195	010	023	1979	12.7	13.7	2.20	14.7	13.40
N195	010	023	1979	6.9	7.7	7.70	14.7	13.40
N195	010	018	1979	11.0	13.0	0.70	11.8	10.20
N195	010	018	1979	8.1	8.9	5.00	11.8	10.20
N195	010	008	1979	9.3	10.1	2.10	11.1	10.30
N195	010	008	1979	8.4	9.1	3.60	11.1	10.30
N195	011	001	1979	22.0	24.7	0.70	21.5	14.90
N195	011	001	1979	15.5	16.4	4.00	21.5	14.90
N195	011	013	1979	18.2	19.0	2.70	21.5	14.60
N195	011	013	1979	8.3	9.0	10.40	21.5	14.60
N195	011	018	1979	12.2	12.9	3.10	15.2	11.30
N195	011	023	1979	13.9	15.0	1.40	15.0	11.20
N195	011	021	1979	18.1	21.6	0.00	18.0	14.10
N195	011	021	1979	17.2	19.8	0.70	18.0	14.10
N195	019	023	1979	8.6	9.4	1.40	9.4	9.20
N195	019	025	1979	7.1	7.5	4.60	9.8	11.10
N195	019	001	1979	23.2	26.1	0.00	21.9	16.20
N195	019	001	1979	21.6	24.0	0.70	21.9	16.20
N195	019	004	1979	22.0	26.1	0.00	22.1	15.90
N195	019	004	1979	21.0	24.1	0.70	22.1	15.90
N195	019	027	1979	10.1	10.7	3.50	12.7	11.70
N195	019	027	1979	9.1	9.7	4.90	12.7	11.70
N195	020	001	1979	20.3	21.3	2.94	23.8	16.00
N195	020	001	1979	7.8	8.8	12.10	23.8	16.00
N195	020	016	1979	19.4	20.8	3.90	25.8	17.10
N195	020	016	1979	6.8	7.8	13.70	25.8	17.10
N195	020	014	1979	11.2	12.0	9.00	18.0	17.70
N195	020	014	1979	4.1	5.0	15.70	18.0	17.70
N195	020	023	1979	14.5	15.5	3.25	18.0	15.90
N195	020	023	1979	4.2	5.0	13.65	18.0	15.90
N195	020	021	1979	19.1	20.6	1.40	20.6	16.60
N195	020	021	1979	7.7	8.5	11.15	20.6	16.60
N193	001	011	1975	4.9	5.1	0.00	4.3	4.22
N193	001	022	1975	9.2	9.6	3.36	12.1	10.14
N193	001	022	1975	7.8	8.0	4.52	12.1	10.14
N193	001	032	1975	9.9	10.5	0.70	9.7	7.44
N193	001	032	1975	9.2	9.7	1.40	9.7	7.44
N193	001	037	1975	2.0	2.2	1.94	3.0	3.23
N193	001	044	1975	10.5	11.5	0.00	9.5	7.07
N193	001	044	1975	9.8	10.5	0.70	9.5	7.07
N193	002	008	1975	9.1	9.7	1.40	9.7	7.96
N193	002	012	1975	2.6	2.8	1.40	2.8	2.78
N193	002	046	1975	10.5	11.3	0.75	9.4	6.44
N193	002	052	1975	5.7	6.1	0.00	4.9	4.56
N193	002	053	1975	9.9	10.6	1.40	10.6	8.39

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	003	004	1975	7.0	7.3	2.14	8.3	7.45
N193	003	004	1975	3.8	4.0	6.74	8.3	7.45
N193	003	022	1975	14.1	15.0	1.40	15.0	10.62
N193	003	022	1975	8.5	8.9	5.25	15.0	10.62
N193	003	036	1975	3.5	3.7	4.88	6.7	7.20
N193	003	040	1975	17.0	18.8	0.00	16.0	10.43
N193	003	040	1975	8.9	9.3	5.62	16.0	10.43
N193	003	045	1975	14.6	16.4	0.00	13.9	9.43
N193	003	045	1975	9.5	10.0	3.68	13.9	9.43
N193	004	002	1975	15.5	17.4	0.00	11.5	7.83
N193	004	002	1975	5.9	6.1	4.66	11.5	7.83
N193	004	011	1975	1.0	1.2	2.98	2.7	3.30
N193	004	025	1975	7.9	8.1	2.60	9.9	6.98
N193	004	053	1975	3.9	4.1	1.40	4.1	4.18
N193	004	054	1975	5.5	5.7	3.76	8.6	6.43
N193	005	004	1975	9.3	9.9	1.40	9.9	7.96
N193	005	004	1975	5.2	5.4	4.47	9.9	7.96
N193	005	018	1975	11.4	12.4	0.67	11.4	6.99
N193	005	018	1975	6.2	6.4	3.62	11.4	6.99
N193	005	024	1975	2.6	2.8	1.90	3.3	3.80
N193	005	057	1975	4.5	4.7	0.70	4.4	4.75
N193	005	058	1975	5.3	5.5	3.93	8.9	7.43
N193	005	058	1975	2.9	3.1	5.85	8.9	7.43
N193	006	012	1975	14.0	15.0	1.40	15.0	9.84
N193	006	012	1975	6.6	6.8	6.60	15.0	9.84
N193	006	028	1975	5.3	5.7	0.70	5.4	6.64
N193	006	039	1975	10.6	10.9	2.40	11.5	9.60
N193	006	039	1975	5.9	6.1	6.86	11.5	9.60
N193	006	054	1975	10.4	10.9	2.50	12.1	9.58
N193	006	054	1975	4.5	4.7	7.13	12.1	9.58
N193	006	058	1975	6.3	6.5	1.40	6.5	7.26
N193	007	021	1975	2.3	2.5	1.40	2.5	3.27
N193	007	022	1975	1.7	1.9	2.20	2.8	3.03
N193	007	053	1975	9.4	10.2	0.70	9.5	7.51
N193	007	055	1975	4.9	5.1	3.30	7.7	6.36
N193	007	057	1975	3.5	3.7	5.45	8.2	7.43
N193	007	057	1975	2.6	2.8	6.25	8.2	7.43
N193	008	006	1975	5.1	5.3	0.72	5.0	5.74
N193	008	015	1975	12.4	13.5	1.40	13.5	9.39
N193	008	015	1975	7.0	7.2	5.55	13.5	9.39
N193	008	032	1975	6.5	6.7	2.34	7.4	6.67
N193	008	049	1975	13.3	14.3	1.40	14.3	9.81
N193	008	049	1975	6.0	6.2	5.77	14.3	9.81
N193	008	054	1975	13.7	15.0	0.00	12.9	9.45
N193	008	054	1975	9.9	10.1	4.40	12.9	9.45
N193	009	027	1975	6.0	6.2	3.24	9.3	6.77
N193	009	032	1975	7.3	7.5	3.51	10.7	8.75
N193	009	032	1975	5.0	5.2	5.77	10.7	8.75
N193	009	037	1975	3.2	3.4	0.70	2.4	2.56
N193	009	039	1975	6.0	6.7	0.64	4.9	3.50
N193	009	043	1975	5.8	6.0	3.70	9.0	6.89
N193	010	057	1975	2.2	2.4	1.45	3.1	2.26

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	010	058	1975	2.3	2.5	2.00	3.5	3.47
N193	010	059	1975	8.5	9.1	1.40	9.1	6.09
N193	010	059	1975	8.0	8.4	1.96	9.1	6.09
N193	010	060	1975	8.5	9.3	0.00	7.9	5.60
N193	010	061	1975	3.0	3.2	3.38	6.3	4.66
N193	011	019	1975	9.1	9.5	2.55	11.1	8.40
N193	011	019	1975	8.1	8.5	3.18	11.1	8.40
N193	011	022	1975	11.3	12.2	0.00	9.8	7.85
N193	011	022	1975	5.0	5.2	5.20	9.8	7.85
N193	011	035	1975	9.3	9.7	2.40	10.8	8.05
N193	011	035	1975	5.3	5.5	4.88	10.8	8.05
N193	011	038	1975	2.1	2.3	2.28	3.9	3.04
N193	011	050	1975	2.8	3.0	1.40	3.0	3.58
N193	012	004	1975	15.1	16.5	0.70	15.7	10.11
N193	012	004	1975	9.7	10.1	3.82	15.7	10.11
N193	012	018	1975	4.7	4.9	4.83	7.5	6.69
N193	012	020	1975	11.7	12.3	2.65	14.3	9.71
N193	012	020	1975	8.4	8.6	5.10	14.3	9.71
N193	012	030	1975	6.3	6.5	0.00	5.7	5.33
N193	012	040	1975	15.9	17.7	0.00	16.7	10.21
N193	012	040	1975	15.8	17.2	0.70	16.7	10.21
N193	013	013	1975	14.6	15.3	1.40	15.3	11.00
N193	013	013	1975	10.1	10.3	4.43	15.3	11.00
N193	013	016	1975	5.8	6.0	3.85	7.1	7.56
N193	013	016	1975	4.2	4.4	5.58	7.1	7.56
N193	013	018	1975	4.0	4.2	0.70	4.2	6.26
N193	013	027	1975	12.3	12.5	3.70	15.9	11.23
N193	013	027	1975	9.2	9.4	5.75	15.9	11.23
N193	013	035	1975	16.5	18.0	0.70	16.9	9.57
N193	013	035	1975	13.4	13.8	2.93	16.9	9.57
N193	014	005	1975	7.5	8.0	0.70	7.3	7.15
N193	014	007	1975	7.9	8.3	6.75	14.9	11.39
N193	014	007	1975	3.0	3.2	10.50	14.9	11.39
N193	014	017	1975	5.0	5.2	0.00	5.0	5.33
N193	014	025	1975	6.4	6.6	6.19	16.3	9.58
N193	014	025	1975	5.4	5.6	7.34	16.3	9.58
N193	014	044	1975	13.4	15.2	0.00	12.8	9.02
N193	014	044	1975	12.2	12.8	1.40	12.8	9.02
N193	015	001	1975	2.4	2.6	1.40	2.6	3.02
N193	015	018	1975	11.8	13.2	0.70	11.8	8.32
N193	015	022	1975	1.4	1.6	2.92	3.3	3.68
N193	015	042	1975	6.8	7.0	3.86	10.2	7.63
N193	015	046	1975	8.4	8.8	1.40	8.8	6.87
N193	001	001	1979	11.3	12.4	1.40	12.4	11.70
N193	001	001	1979	8.0	8.4	6.30	12.4	11.70
N193	001	005	1979	5.9	6.3	10.10	16.3	12.50
N193	001	016	1979	18.6	21.6	0.75	19.0	13.90
N193	001	016	1979	8.6	9.0	7.60	19.0	13.90
N193	001	025	1979	9.9	11.0	1.40	11.0	9.50
N193	001	025	1979	6.5	6.9	5.90	11.0	9.50
N193	001	006	1979	14.6	16.5	0.70	15.0	14.10
N193	001	006	1979	7.4	7.8	9.25	15.0	14.10

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	002	003	1979	12.7	14.2	0.70	13.2	8.00
N193	002	003	1979	9.1	9.5	3.70	13.2	8.00
N193	002	011	1979	11.6	13.1	0.70	12.8	8.30
N193	002	011	1979	11.3	12.8	1.40	12.8	8.30
N193	002	008	1979	4.2	4.6	3.10	7.5	5.60
N193	002	009	1979	4.3	4.7	4.50	7.8	7.00
N193	002	021	1979	9.0	9.8	1.40	9.8	7.50
N193	003	019	1979	16.8	18.4	0.70	17.7	15.50
N193	003	019	1979	10.8	11.2	7.90	17.7	15.50
N193	003	012	1979	17.4	19.4	0.00	16.6	15.80
N193	003	015	1979	14.3	15.3	7.70	22.2	17.30
N193	003	015	1979	6.6	7.2	13.40	22.2	17.30
N193	003	025	1979	22.4	26.1	0.00	21.9	18.00
N193	003	025	1979	19.4	21.9	1.40	21.9	18.00
N193	003	009	1979	9.2	9.6	9.90	19.6	16.10
N193	003	009	1979	4.2	4.6	13.45	19.6	16.10
N193	004	013	1979	4.8	5.2	8.50	15.2	11.25
N193	004	010	1979	14.5	16.5	0.00	13.7	9.50
N193	004	010	1979	8.1	8.7	5.90	13.7	9.50
N193	004	019	1979	8.3	9.1	0.75	8.4	7.10
N193	004	021	1979	7.1	7.5	3.80	10.6	9.00
N193	004	021	1979	5.2	5.6	5.60	10.6	9.00
N193	004	025	1979	6.0	6.4	3.85	8.4	5.75
N193	005	014	1979	9.3	10.4	1.40	10.4	9.90
N193	005	025	1979	12.5	14.6	0.00	12.2	11.50
N193	005	025	1979	10.2	10.6	4.55	12.2	11.50
N193	005	017	1979	16.3	18.3	0.00	15.7	15.25
N193	005	010	1979	8.9	9.5	2.60	10.5	10.35
N193	005	005	1979	11.1	11.5	4.80	14.8	12.40
N193	005	005	1979	9.4	9.8	6.20	14.8	12.40
N193	006	013	1979	20.9	25.1	0.00	21.1	17.20
N193	006	013	1979	17.4	18.6	2.80	21.1	17.20
N193	006	028	1979	19.9	22.1	0.70	19.2	16.35
N193	006	028	1979	13.6	14.2	6.90	19.2	16.35
N193	006	016	1979	16.1	18.7	0.75	17.0	16.40
N193	006	016	1979	6.1	6.5	12.85	17.0	16.40
N193	006	022	1979	15.1	16.8	1.40	16.8	14.75
N193	006	025	1979	20.4	22.7	0.75	21.0	17.00
N193	006	025	1979	10.6	11.0	11.10	21.0	17.00
N193	007	008	1979	9.7	10.1	7.05	17.5	12.00
N193	007	002	1979	14.0	16.9	0.00	15.5	13.50
N193	007	006	1979	10.7	12.0	0.00	10.6	8.80
N193	007	001	1979	7.9	8.7	1.40	8.7	8.60
N193	007	014	1979	8.5	9.6	0.00	8.8	7.05
N193	008	001	1979	27.4	31.3	0.00	24.5	15.10
N193	008	001	1979	22.6	24.5	1.40	24.5	15.10
N193	008	009	1979	19.9	23.3	0.00	18.7	13.95
N193	008	009	1979	17.1	18.7	1.40	18.7	13.95
N193	008	018	1979	13.7	14.3	4.00	17.0	15.10
N193	008	002	1979	19.0	21.5	0.70	20.2	12.70
N193	008	002	1979	6.8	7.2	7.95	20.2	12.70
N193	008	014	1979	20.5	21.3	4.30	26.1	12.90

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	008	014	1979	6.0	6.4	10.40	26.1	12.90
N193	009	006	1979	24.0	26.5	0.00	21.9	15.90
N193	009	006	1979	6.2	6.6	12.10	21.9	15.90
N193	009	027	1979	7.5	8.2	7.45	12.4	13.30
N193	009	027	1979	6.8	7.4	8.65	12.4	13.30
N193	009	019	1979	18.9	23.0	0.00	20.0	14.90
N193	009	019	1979	9.0	9.6	9.00	20.0	14.90
N193	009	015	1979	10.9	12.5	1.80	13.2	10.65
N193	009	015	1979	6.5	7.4	5.65	13.2	10.65
N193	009	011	1979	15.5	17.7	1.40	17.7	13.80
N193	009	011	1979	7.4	8.0	8.80	17.7	13.80
N193	010	006	1979	15.3	17.6	0.80	16.4	9.20
N193	010	011	1979	14.8	16.8	0.70	16.0	8.40
N193	010	003	1979	8.2	9.5	0.70	8.0	4.80
N193	010	005	1979	7.4	8.4	1.40	8.4	5.70
N193	010	004	1979	10.9	13.3	0.00	11.5	4.75
N193	011	008	1979	5.9	6.3	6.35	11.9	9.70
N193	011	017	1979	11.0	11.9	0.70	11.3	9.80
N193	011	017	1979	5.9	6.3	6.00	11.3	9.80
N193	011	003	1979	7.1	7.7	1.40	7.7	6.50
N193	011	015	1979	7.4	7.9	1.40	7.9	7.50
N193	011	024	1979	5.9	6.5	3.40	9.3	5.50
N193	012	009	1979	24.2	29.7	0.00	23.5	16.00
N193	012	009	1979	20.0	21.2	2.70	23.5	16.00
N193	012	013	1979	20.8	21.8	2.70	23.7	15.10
N193	012	013	1979	15.7	16.2	6.20	23.7	15.10
N193	012	001	1979	16.5	19.3	0.80	17.7	16.10
N193	012	001	1979	7.0	7.6	11.45	17.7	16.10
N193	012	006	1979	18.7	20.0	0.70	18.6	14.60
N193	012	006	1979	5.7	6.1	12.60	18.6	14.60
N193	012	002	1979	14.7	15.4	6.10	20.6	14.10
N193	012	002	1979	10.0	10.6	9.00	20.6	14.10
N193	013	003	1979	21.5	22.4	4.60	28.4	17.90
N193	013	003	1979	9.4	9.8	11.70	28.4	17.90
N193	013	007	1979	13.8	14.3	8.40	27.0	16.30
N193	013	007	1979	11.3	12.0	10.30	27.0	16.30
N193	013	018	1979	17.2	18.3	1.40	18.3	16.50
N193	013	018	1979	10.4	10.8	8.90	18.3	16.50
N193	013	017	1979	12.4	13.0	6.30	18.0	15.70
N193	013	017	1979	7.6	8.0	11.20	18.0	15.70
N193	013	011	1979	12.4	13.0	8.90	21.0	18.00
N193	013	011	1979	5.6	6.0	14.80	21.0	18.00
N193	014	021	1979	19.9	21.3	4.50	26.0	18.50
N193	014	021	1979	12.9	13.5	10.50	26.0	18.50
N193	014	023	1979	22.7	27.2	0.00	23.6	17.30
N193	014	023	1979	12.7	13.4	8.30	23.6	17.30
N193	014	003	1979	16.5	19.4	0.70	16.9	14.30
N193	014	003	1979	6.3	6.8	10.00	16.9	14.30
N193	014	018	1979	11.3	12.0	8.40	17.0	15.70
N193	014	014	1979	12.0	12.7	10.10	20.3	15.90
N193	014	014	1979	7.3	7.8	12.65	20.3	15.90
N193	015	001	1979	12.6	13.8	3.10	16.4	12.70

Appendix 17. Sectional measurement data for Motueka.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N193	015	028	1979	18.6	22.6	0.00	16.2	10.20
N193	015	011	1979	9.6	11.2	0.00	10.0	10.20
N193	015	019	1979	9.0	9.5	2.30	10.1	8.80
N193	015	019	1979	5.5	6.0	4.80	10.1	8.80
N193	015	012	1979	12.3	12.8	4.00	14.3	11.70
N193	015	012	1979	10.4	11.2	4.30	14.3	11.70

Appendix 18. Summary of sectionally measured trees for Motueka.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N195	002	005	1975	6.8	5.89	0.0120575	0.0141582
N195	002	018	1975	13.1	8.25	0.0513107	0.0583429
N195	002	023	1975	6.0	6.35	0.0095644	0.0105495
N195	002	032	1975	14.8	7.62	0.0500118	0.0562704
N195	002	039	1975	12.4	9.20	0.0498487	0.0566108
N195	003	010	1975	3.3	3.12	0.0020030	0.0023960
N195	003	015	1975	9.4	5.65	0.0186150	0.0215666
N195	003	016	1975	2.5	2.32	0.0013832	0.0015687
N195	003	046	1975	12.9	8.75	0.0449784	0.0528834
N195	003	059	1975	10.2	7.11	0.0297406	0.0345114
N195	010	003	1975	2.5	2.50	0.0011077	0.0012848
N195	010	013	1975	3.8	3.41	0.0027176	0.0030267
N195	010	037	1975	8.5	6.22	0.0200414	0.0229878
N195	010	040	1975	9.2	6.32	0.0235428	0.0286956
N195	010	048	1975	10.2	7.16	0.0309235	0.0352338
N195	011	008	1975	4.5	4.42	0.0045567	0.0050142
N195	011	013	1975	12.0	7.62	0.0414073	0.0458691
N195	011	030	1975	4.7	4.05	0.0049801	0.0055723
N195	011	040	1975	10.8	6.62	0.0288471	0.0336417
N195	011	057	1975	11.5	6.95	0.0303774	0.0366456
N195	019	001	1975	10.5	7.01	0.0302002	0.0339115
N195	019	005	1975	11.3	8.58	0.0376815	0.0434046
N195	019	011	1975	3.3	3.26	0.0024126	0.0027100
N195	019	018	1975	9.0	7.24	0.0293371	0.0319910
N195	019	043	1975	2.6	2.68	0.0018083	0.0020269
N195	020	015	1975	14.8	9.10	0.0706966	0.0802864
N195	020	024	1975	4.7	5.00	0.0052064	0.0057298
N195	020	032	1975	12.0	9.30	0.0500773	0.0552313
N195	020	037	1975	7.6	6.55	0.0136900	0.0153933
N195	020	048	1975	13.7	9.49	0.0667618	0.0757668
N195	002	017	1979	26.0	18.10	0.3447421	0.3985237
N195	002	019	1979	24.5	15.80	0.3115854	0.3621182
N195	002	010	1979	15.9	14.40	0.1230490	0.1419384
N195	002	012	1979	16.3	15.50	0.1324075	0.1560788
N195	002	014	1979	19.8	15.00	0.1871757	0.2186387
N195	002	013	1979	17.0	14.80	0.1395286	0.1660412
N195	003	021	1979	17.1	13.10	0.1295309	0.1577848
N195	003	023	1979	11.6	11.00	0.0492969	0.0607687
N195	003	026	1979	11.4	12.70	0.0546601	0.0644034
N195	003	017	1979	14.5	12.70	0.0881984	0.1064696
N195	010	003	1979	18.6	14.50	0.1574956	0.1876480
N195	010	020	1979	21.5	15.20	0.1789139	0.2235150
N195	010	023	1979	14.7	13.40	0.0857313	0.1038190
N195	010	018	1979	11.8	10.20	0.0494807	0.0626106
N195	010	008	1979	11.1	10.30	0.0432245	0.0543226
N195	011	001	1979	21.5	14.90	0.2014948	0.2361431
N195	011	013	1979	21.5	14.60	0.2035059	0.2344008
N195	011	018	1979	15.2	11.30	0.0913783	0.1100871
N195	011	023	1979	15.0	11.20	0.0891809	0.1062886
N195	011	021	1979	18.0	14.10	0.1451650	0.1734174
N195	019	023	1979	9.4	9.20	0.0297263	0.0348278
N195	019	025	1979	9.8	11.10	0.0381954	0.0438187
N195	019	001	1979	21.9	16.20	0.2226094	0.2589930

Appendix 18. Summary of sectionally measured trees for
(cont.) Motueka.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N195	019	004	1979	22.1	15.90	0.2405466	0.2844763
N195	019	027	1979	12.7	11.70	0.0665342	0.0814749
N195	020	001	1979	23.8	16.00	0.2705415	0.3184842
N195	020	016	1979	25.8	17.10	0.3111774	0.3757834
N195	020	014	1979	18.0	17.70	0.1820743	0.2159244
N195	020	023	1979	18.0	15.90	0.1601354	0.1931258
N195	020	021	1979	20.6	16.60	0.2047222	0.2425578
N193	001	011	1975	4.3	4.22	0.0038458	0.0042521
N193	001	022	1975	12.1	10.14	0.0517026	0.0580912
N193	001	032	1975	9.7	7.44	0.0266133	0.0291083
N193	001	037	1975	3.0	3.23	0.0016875	0.0020086
N193	001	044	1975	9.5	7.07	0.0232757	0.0259180
N193	002	008	1975	9.7	7.96	0.0253093	0.0279101
N193	002	012	1975	2.8	2.78	0.0016288	0.0018432
N193	002	046	1975	9.4	6.44	0.0224796	0.0254661
N193	002	052	1975	4.9	4.56	0.0050892	0.0057809
N193	002	053	1975	10.6	8.39	0.0355446	0.0398218
N193	003	004	1975	8.3	7.45	0.0234053	0.0255156
N193	003	022	1975	15.0	10.62	0.0734475	0.0824772
N193	003	036	1975	6.7	7.20	0.0132768	0.0146240
N193	003	040	1975	16.0	10.43	0.0947840	0.1062174
N193	003	045	1975	13.9	9.43	0.0594566	0.0679087
N193	004	002	1975	11.5	7.83	0.0413955	0.0464186
N193	004	011	1975	2.7	3.30	0.0014108	0.0016427
N193	004	025	1975	9.9	6.98	0.0264023	0.0290407
N193	004	053	1975	4.1	4.18	0.0042560	0.0049264
N193	004	054	1975	8.6	6.43	0.0191758	0.0216402
N193	005	004	1975	9.9	7.96	0.0282217	0.0313999
N193	005	018	1975	11.4	6.99	0.0314676	0.0355494
N193	005	024	1975	3.3	3.80	0.0022630	0.0025603
N193	005	057	1975	4.4	4.75	0.0043186	0.0047864
N193	005	058	1975	8.9	7.43	0.0238865	0.0266245
N193	006	012	1975	15.0	9.84	0.0795596	0.0895379
N193	006	028	1975	5.4	6.64	0.0086727	0.0096835
N193	006	039	1975	11.5	9.60	0.0541654	0.0587655
N193	006	054	1975	12.1	9.58	0.0466757	0.0521335
N193	006	058	1975	6.5	7.26	0.0140925	0.0153348
N193	007	021	1975	2.5	3.27	0.0012879	0.0014952
N193	007	022	1975	2.8	3.03	0.0018192	0.0020541
N193	007	053	1975	9.5	7.51	0.0226821	0.0257178
N193	007	055	1975	7.7	6.36	0.0153608	0.0171410
N193	007	057	1975	8.2	7.43	0.0182709	0.0205515
N193	008	006	1975	5.0	5.74	0.0063340	0.0069387
N193	008	015	1975	13.5	9.39	0.0572903	0.0655236
N193	008	032	1975	7.4	6.67	0.0154648	0.0171955
N193	008	049	1975	14.3	9.81	0.0626476	0.0720753
N193	008	054	1975	12.9	9.45	0.0626414	0.0682094
N193	009	027	1975	9.3	6.77	0.0229487	0.0259814
N193	009	032	1975	10.7	8.75	0.0330527	0.0368363
N193	009	037	1975	2.4	2.56	0.0013362	0.0015237
N193	009	039	1975	4.9	3.50	0.0053665	0.0066027
N193	009	043	1975	9.0	6.89	0.0226297	0.0255463
N193	010	057	1975	3.1	2.26	0.0017206	0.0020654

Appendix 18. Summary of sectionally measured trees for
(cont.) Motueka.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N193	010	058	1975	3.5	3.47	0.0022902	0.0025712
N193	010	059	1975	9.1	6.09	0.0207833	0.0235858
N193	010	060	1975	7.9	5.60	0.0117228	0.0136454
N193	010	061	1975	6.3	4.66	0.0088647	0.0101716
N193	011	019	1975	11.1	8.40	0.0371929	0.0422981
N193	011	022	1975	9.8	7.85	0.0298544	0.0330053
N193	011	035	1975	10.8	8.05	0.0397871	0.0456053
N193	011	038	1975	3.9	3.04	0.0033771	0.0037037
N193	011	050	1975	3.0	3.58	0.0015384	0.0017787
N193	012	004	1975	15.7	10.11	0.0714137	0.0807981
N193	012	018	1975	7.5	6.69	0.0191772	0.0213497
N193	012	020	1975	14.3	9.71	0.0657038	0.0739082
N193	012	030	1975	5.7	5.33	0.0080799	0.0087436
N193	012	040	1975	16.7	10.21	0.0879800	0.0990518
N193	013	013	1975	15.3	11.00	0.0853222	0.0939146
N193	013	016	1975	7.1	7.56	0.0180247	0.0195160
N193	013	018	1975	4.2	6.26	0.0047368	0.0052640
N193	013	027	1975	15.9	11.23	0.0912377	0.0997145
N193	013	035	1975	16.9	9.57	0.0921070	0.1025715
N193	014	005	1975	7.3	7.15	0.0149215	0.0166944
N193	014	007	1975	14.9	11.39	0.0874788	0.0979779
N193	014	017	1975	5.0	5.33	0.0063614	0.0069778
N193	014	025	1975	16.3	9.58	0.0818641	0.0915906
N193	014	044	1975	12.8	9.02	0.0512311	0.0569975
N193	015	001	1975	2.6	3.02	0.0010363	0.0012208
N193	015	018	1975	11.8	8.32	0.0387152	0.0451269
N193	015	022	1975	3.3	3.68	0.0020623	0.0023481
N193	015	042	1975	10.2	7.63	0.0284410	0.0332642
N193	015	046	1975	8.8	6.87	0.0223254	0.0254664
N193	001	001	1979	12.4	11.70	0.0634555	0.0735172
N193	001	005	1979	16.3	12.50	0.1095413	0.1330560
N193	001	016	1979	19.0	13.90	0.1458754	0.1756640
N193	001	025	1979	11.0	9.50	0.0421284	0.0498532
N193	001	006	1979	15.0	14.10	0.1127189	0.1299880
N193	002	003	1979	13.2	8.00	0.0460730	0.0537633
N193	002	011	1979	12.8	8.30	0.0487521	0.0576019
N193	002	008	1979	7.5	5.60	0.0109356	0.0131694
N193	002	009	1979	7.8	7.00	0.0148548	0.0185107
N193	002	021	1979	9.8	7.50	0.0288138	0.0344335
N193	003	019	1979	17.7	15.50	0.1472304	0.1668374
N193	003	012	1979	16.6	15.80	0.1459885	0.1678363
N193	003	015	1979	22.2	17.30	0.2415016	0.2965417
N193	003	025	1979	21.9	18.00	0.2697901	0.3152577
N193	003	009	1979	19.6	16.10	0.1821184	0.2109444
N193	004	013	1979	15.2	11.25	0.0800005	0.0948359
N193	004	010	1979	13.7	9.50	0.0644687	0.0765608
N193	004	019	1979	8.4	7.10	0.0195381	0.0229352
N193	004	021	1979	10.6	9.00	0.0318683	0.0396704
N193	004	025	1979	8.4	5.75	0.0207465	0.0239136
N193	005	014	1979	10.4	9.90	0.0365700	0.0427642
N193	005	025	1979	12.2	11.50	0.0581221	0.0678266
N193	005	017	1979	15.7	15.25	0.1243204	0.1460612
N193	005	010	1979	10.5	10.35	0.0382113	0.0452017

Appendix 18. Summary of sectionally measured trees for
(cont.) Motueka.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N193	005	005	1979	14.8	12.40	0.0905860	0.1023213
N193	006	013	1979	21.1	17.20	0.2327189	0.2689078
N193	006	028	1979	19.2	16.35	0.2117729	0.2379321
N193	006	016	1979	17.0	16.40	0.1453368	0.1682294
N193	006	022	1979	16.8	14.75	0.1447111	0.1703513
N193	006	025	1979	21.0	17.00	0.2513423	0.2805943
N193	007	008	1979	17.5	12.00	0.1200846	0.1424997
N193	007	002	1979	15.5	13.50	0.0961944	0.1137208
N193	007	006	1979	10.6	8.80	0.0330371	0.0390970
N193	007	001	1979	8.7	8.60	0.0230176	0.0272174
N193	007	014	1979	8.8	7.05	0.0191303	0.0225919
N193	008	001	1979	24.5	15.10	0.2807817	0.3158925
N193	008	009	1979	18.7	13.95	0.1564174	0.1816284
N193	008	018	1979	17.0	15.10	0.1496524	0.1777952
N193	008	002	1979	20.2	12.70	0.1478626	0.1736170
N193	008	014	1979	26.1	12.90	0.2849930	0.3319245
N193	009	006	1979	21.9	15.90	0.2392979	0.2744194
N193	009	027	1979	12.4	13.30	0.0724023	0.0854254
N193	009	019	1979	20.0	14.90	0.1554280	0.1929784
N193	009	015	1979	13.2	10.65	0.0505760	0.0657654
N193	009	011	1979	17.7	13.80	0.1214554	0.1509604
N193	010	006	1979	16.4	9.20	0.0685804	0.0850462
N193	010	011	1979	16.0	8.40	0.0737454	0.0882647
N193	010	003	1979	8.0	4.80	0.0127674	0.0163494
N193	010	005	1979	8.4	5.70	0.0142974	0.0196790
N193	010	004	1979	11.5	4.75	0.0192865	0.0260638
N193	011	008	1979	11.9	9.70	0.0449826	0.0532768
N193	011	017	1979	11.3	9.80	0.0429781	0.0498252
N193	011	003	1979	7.7	6.50	0.0132279	0.0157943
N193	011	015	1979	7.9	7.50	0.0162459	0.0187856
N193	011	024	1979	9.3	5.50	0.0185518	0.0231163
N193	012	009	1979	23.5	16.00	0.2656358	0.3165452
N193	012	013	1979	23.7	15.10	0.2619334	0.2992226
N193	012	001	1979	17.7	16.10	0.1544968	0.1815997
N193	012	006	1979	18.6	14.60	0.1788557	0.1964910
N193	012	002	1979	20.6	14.10	0.1950846	0.2283806
N193	013	003	1979	28.4	17.90	0.3795236	0.4298412
N193	013	007	1979	27.0	16.30	0.3433478	0.3962740
N193	013	018	1979	18.3	16.50	0.1849836	0.2078915
N193	013	017	1979	18.0	15.70	0.1624973	0.1843739
N193	013	011	1979	21.0	18.00	0.2516928	0.2918932
N193	014	021	1979	26.0	18.50	0.3493431	0.4090081
N193	014	023	1979	23.6	17.30	0.2547280	0.3018700
N193	014	003	1979	16.9	14.30	0.1229783	0.1494198
N193	014	018	1979	17.0	15.70	0.1638972	0.1940394
N193	014	014	1979	20.3	15.90	0.2161666	0.2523232
N193	015	001	1979	16.4	12.70	0.1077687	0.1343859
N193	015	028	1979	16.2	10.20	0.1056235	0.1293163
N193	015	011	1979	10.0	10.20	0.0360187	0.0433356
N193	015	019	1979	10.1	8.80	0.0279389	0.0353091
N193	015	012	1979	14.3	11.70	0.0833706	0.0961257

Appendix 19. Stand volume data for Motueka.

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N195	002	1975	26.3	29.8	741.	7.5	7.1	9.0
N195	003	1975	9.9	11.6	716.	3.1	7.1	7.3
N195	010	1975	10.2	11.9	716.	2.9	7.1	7.7
N195	011	1975	12.7	14.6	741.	4.0	7.1	7.1
N195	019	1975	11.6	12.9	741.	3.0	7.1	7.4
N195	020	1975	22.8	25.6	716.	5.6	7.1	9.4
N195	002	1979	175.2	203.8	741.	27.3	11.0	17.1
N195	003	1979	69.3	84.1	716.	12.7	11.0	13.9
N195	010	1979	58.2	71.5	716.	11.6	11.0	13.5
N195	011	1979	112.9	132.7	741.	20.6	11.0	14.5
N195	019	1979	63.5	74.9	741.	11.4	11.0	14.0
N195	020	1979	156.8	186.9	716.	25.0	11.0	15.9
N193	001	1975	14.7	16.4	741.	3.9	7.1	7.4
N193	002	1975	8.7	9.7	741.	2.6	7.1	6.6
N193	003	1975	33.0	36.9	741.	7.8	7.1	8.9
N193	004	1975	9.0	10.1	741.	2.6	7.1	6.5
N193	005	1975	7.9	8.8	741.	2.3	7.1	7.5
N193	006	1975	35.6	39.6	741.	7.9	7.1	10.2
N193	007	1975	5.9	6.6	716.	1.8	7.1	6.6
N193	008	1975	33.0	37.2	741.	8.0	7.1	9.2
N193	009	1975	14.0	15.8	741.	4.0	7.1	7.7
N193	010	1975	3.3	3.8	741.	1.3	7.1	4.7
N193	011	1975	9.0	10.2	716.	2.4	7.1	7.0
N193	012	1975	29.8	33.5	741.	7.6	7.1	8.9
N193	013	1975	37.1	40.8	741.	8.4	7.1	10.7
N193	014	1975	40.7	45.5	741.	9.6	7.1	10.7
N193	015	1975	8.9	10.3	716.	2.6	7.1	6.7
N193	001	1979	72.3	85.9	741.	13.5	11.0	13.3
N193	002	1979	23.6	28.0	741.	6.8	11.0	8.5
N193	003	1979	176.9	210.7	741.	27.0	11.0	15.7
N193	004	1979	32.5	38.7	741.	7.9	11.0	11.7
N193	005	1979	58.3	67.7	741.	10.6	11.0	12.8
N193	006	1979	188.0	212.4	741.	26.6	11.0	17.7
N193	007	1979	33.1	39.2	716.	7.6	11.0	12.4
N193	008	1979	161.0	186.1	741.	29.0	11.0	16.4
N193	009	1979	76.5	93.1	741.	14.9	11.0	14.8
N193	010	1979	21.3	27.0	741.	7.5	11.0	10.1
N193	011	1979	36.0	42.4	716.	8.6	11.0	12.4
N193	012	1979	168.8	195.9	741.	27.8	11.0	17.2
N193	013	1979	206.7	236.1	741.	32.7	11.0	18.0
N193	014	1979	215.2	252.8	741.	33.9	11.0	18.3
N193	015	1979	53.1	64.6	716.	10.8	11.0	14.0

Appendix 20. Data for diameter distributions in Motueka.

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N193	001	1975	5.1	7.99	2.87	741.	3.9	7.1	26.39	0	0	0	7.1
N193	001	1976	6.4	9.96	3.97	741.	6.0	8.0	26.39	0	0	0	7.1
N193	001	1977	7.5	11.72	5.31	741.	8.3	9.1	26.39	0	0	0	7.1
N193	001	1978	8.4	13.25	6.89	741.	10.6	10.0	26.39	0	0	0	7.1
N193	001	1979	9.5	14.95	8.98	741.	13.5	11.0	26.39	0	0	0	7.1
N193	002	1975	3.6	6.43	3.16	741.	2.6	7.1	24.01	150	0	0	7.1
N193	002	1976	5.0	7.97	4.27	741.	3.9	8.0	24.01	150	0	0	7.1
N193	002	1977	5.5	8.89	5.58	741.	4.9	9.1	24.01	150	0	0	7.1
N193	002	1978	5.8	9.57	6.89	741.	5.7	10.0	24.01	150	0	0	7.1
N193	002	1979	6.1	10.37	8.91	741.	6.8	11.0	24.01	150	0	0	7.1
N193	003	1975	7.1	11.44	2.81	741.	7.8	7.1	28.81	0	75	0	7.1
N193	003	1976	9.5	14.60	4.02	741.	12.6	8.0	28.81	0	75	0	7.1
N193	003	1977	11.9	17.42	4.96	741.	17.9	9.1	28.81	0	75	0	7.1
N193	003	1978	13.6	19.29	5.81	741.	22.0	10.0	28.81	0	75	0	7.1
N193	003	1979	15.6	21.39	6.56	741.	27.0	11.0	28.81	0	75	0	7.1
N193	004	1975	2.5	6.44	3.46	741.	2.6	7.1	23.20	150	0	0	7.1
N193	004	1976	3.9	8.30	5.27	741.	4.3	8.0	23.20	150	0	0	7.1
N193	004	1977	4.4	9.44	6.67	741.	5.6	9.1	23.20	150	0	0	7.1
N193	004	1978	4.5	10.32	7.51	741.	6.6	10.0	23.20	150	0	0	7.1
N193	004	1979	4.5	11.27	8.92	741.	7.9	11.0	23.20	150	0	0	7.1
N193	005	1975	4.1	6.07	1.93	741.	2.2	7.1	25.40	0	0	0	7.1
N193	005	1976	5.1	8.00	3.27	741.	3.9	8.0	25.40	0	0	0	7.1
N193	005	1977	6.1	9.82	4.45	741.	5.9	9.1	25.40	0	0	0	7.1
N193	005	1978	7.0	11.38	5.53	741.	7.8	10.0	25.40	0	0	0	7.1
N193	005	1979	7.9	13.23	7.21	741.	10.6	11.0	25.40	0	0	0	7.1
N193	006	1975	8.4	11.58	2.51	741.	7.9	7.1	31.16	0	75	0	7.1
N193	006	1976	10.8	14.58	3.92	741.	12.6	8.0	31.16	0	75	0	7.1
N193	006	1977	13.2	17.19	5.93	741.	17.5	9.1	31.16	0	75	0	7.1
N193	006	1978	14.9	19.25	7.56	741.	22.0	10.0	31.16	0	75	0	7.1
N193	006	1979	16.8	21.20	8.76	741.	26.6	11.0	31.16	0	75	0	7.1
N193	007	1975	2.5	5.36	3.89	716.	1.8	7.1	24.25	0	0	0	7.1
N193	007	1976	3.5	6.99	5.60	716.	3.1	8.0	24.25	0	0	0	7.1
N193	007	1977	4.3	8.49	7.59	716.	4.5	9.1	24.25	0	0	0	7.1
N193	007	1978	4.8	9.72	9.46	716.	5.8	10.0	24.25	0	0	0	7.1
N193	007	1979	5.3	11.16	11.56	716.	7.6	11.0	24.25	0	0	0	7.1
N193	008	1975	8.4	11.62	2.71	741.	8.0	7.1	29.48	150	75	0	7.1
N193	008	1976	11.0	15.29	4.27	741.	13.8	8.0	29.48	150	75	0	7.1
N193	008	1977	13.2	18.39	6.55	741.	20.0	9.1	29.48	150	75	0	7.1
N193	008	1978	14.7	20.53	8.41	741.	25.0	10.0	29.48	150	75	0	7.1
N193	008	1979	16.2	22.10	9.41	741.	29.0	11.0	29.48	150	75	0	7.1
N193	009	1975	4.1	8.06	3.35	741.	4.0	7.1	28.44	0	0	0	7.1
N193	009	1976	6.2	10.43	4.29	741.	6.6	8.0	28.44	0	0	0	7.1
N193	009	1977	7.5	12.41	6.08	741.	9.3	9.1	28.44	0	0	0	7.1
N193	009	1978	8.3	14.06	7.61	741.	11.9	10.0	28.44	0	0	0	7.1
N193	009	1979	9.1	15.73	9.61	741.	14.9	11.0	28.44	0	0	0	7.1
N193	010	1975	1.5	4.39	3.61	741.	1.3	7.1	21.14	0	0	0	7.1
N193	010	1976	2.6	6.16	5.34	741.	2.5	8.0	21.14	0	0	0	7.1
N193	010	1977	3.5	7.83	7.82	741.	4.0	9.1	21.14	0	0	0	7.1
N193	010	1978	4.6	9.26	10.00	741.	5.5	10.0	21.14	0	0	0	7.1
N193	010	1979	5.7	10.82	13.12	741.	7.5	11.0	21.14	0	0	0	7.1
N193	011	1975	4.1	6.33	2.59	716.	2.4	7.1	25.03	150	0	0	7.1
N193	011	1976	5.2	8.44	4.01	716.	4.2	8.0	25.03	150	0	0	7.1
N193	011	1977	6.0	9.68	5.21	716.	5.6	9.1	25.03	150	0	0	7.1

Appendix 20. Data for diameter distributions in Motueka.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N193	011	1978	6.7	10.73	6.54	716.	6.8	10.0	25.03	150	0	0	7.1
N193	011	1979	7.7	12.01	8.72	716.	8.6	11.0	25.03	150	0	0	7.1
N193	012	1975	1.7	11.19	6.29	741.	7.6	7.1	28.81	0	75	0	7.1
N193	012	1976	12.2	15.08	4.24	741.	13.5	8.0	28.81	0	75	0	7.1
N193	012	1977	14.3	17.77	5.37	741.	18.7	9.1	28.81	0	75	0	7.1
N193	012	1978	15.9	19.85	6.06	741.	23.3	10.0	28.81	0	75	0	7.1
N193	012	1979	17.3	21.73	6.41	741.	27.8	11.0	28.81	0	75	0	7.1
N193	013	1975	7.9	11.81	5.25	741.	8.4	7.1	32.12	150	75	0	7.1
N193	013	1976	11.4	16.26	9.08	741.	15.9	8.0	32.12	150	75	0	7.1
N193	013	1977	12.7	19.51	14.60	741.	23.0	9.1	32.12	150	75	0	7.1
N193	013	1978	13.4	21.60	18.35	741.	28.2	10.0	32.12	150	75	0	7.1
N193	013	1979	14.3	23.27	20.78	741.	32.7	11.0	32.12	150	75	0	7.1
N193	014	1975	9.1	12.71	2.90	741.	9.6	7.1	32.19	150	75	0	7.1
N193	014	1976	11.9	16.62	4.67	741.	16.3	8.0	32.19	150	75	0	7.1
N193	014	1977	13.8	20.07	8.53	741.	23.9	9.1	32.19	150	75	0	7.1
N193	014	1978	15.3	22.33	10.59	741.	29.6	10.0	32.19	150	75	0	7.1
N193	014	1979	16.6	23.90	12.52	741.	33.9	11.0	32.19	150	75	0	7.1
N193	015	1975	4.1	6.68	2.36	716.	2.6	7.1	25.69	0	0	0	7.1
N193	015	1976	5.6	8.58	3.15	716.	4.3	8.0	25.69	0	0	0	7.1
N193	015	1977	7.1	10.31	4.22	716.	6.2	9.1	25.69	0	0	0	7.1
N193	015	1978	8.0	11.84	5.42	716.	8.2	10.0	25.69	0	0	0	7.1
N193	015	1979	9.3	13.60	6.99	716.	10.8	11.0	25.69	0	0	0	7.1
N195	002	1975	9.1	11.27	2.21	741.	7.5	7.1	29.07	0	75	0	7.1
N195	002	1976	11.8	14.25	3.46	741.	12.0	8.0	29.07	0	75	0	7.1
N195	002	1977	13.4	17.13	5.31	741.	17.4	9.1	29.07	0	75	0	7.1
N195	002	1978	14.6	19.40	6.95	741.	22.3	10.0	29.07	0	75	0	7.1
N195	002	1979	15.9	21.46	8.90	741.	27.3	11.0	29.07	0	75	0	7.1
N195	003	1975	4.3	7.20	3.22	716.	3.1	7.1	26.60	0	0	0	7.1
N195	003	1976	6.1	9.50	3.67	716.	5.3	8.0	26.60	0	0	0	7.1
N195	003	1977	7.7	11.51	4.63	716.	7.7	9.1	26.60	0	0	0	7.1
N195	003	1978	8.7	13.10	5.97	716.	10.0	10.0	26.60	0	0	0	7.1
N195	003	1979	9.8	14.81	7.45	716.	12.7	11.0	26.60	0	0	0	7.1
N195	010	1975	4.3	7.02	2.72	716.	2.9	7.1	26.95	0	0	0	7.1
N195	010	1976	5.5	9.13	4.20	716.	4.9	8.0	26.95	0	0	0	7.1
N195	010	1977	6.6	10.86	5.74	716.	6.9	9.1	26.95	0	0	0	7.1
N195	010	1978	7.7	12.41	7.40	716.	9.1	10.0	26.95	0	0	0	7.1
N195	010	1979	8.8	14.06	9.41	716.	11.6	11.0	26.95	0	0	0	7.1
N195	011	1975	4.3	8.08	3.24	741.	4.0	7.1	25.08	0	75	0	7.1
N195	011	1976	7.4	11.52	4.28	741.	8.0	8.0	25.08	0	75	0	7.1
N195	011	1977	8.9	14.14	5.80	741.	12.0	9.1	25.08	0	75	0	7.1
N195	011	1978	10.2	16.37	7.17	741.	16.0	10.0	25.08	0	75	0	7.1
N195	011	1979	11.4	18.59	8.72	741.	20.6	11.0	25.08	0	75	0	7.1
N195	019	1975	4.1	6.89	3.44	741.	3.0	7.1	27.68	0	0	0	7.1
N195	019	1976	5.7	9.05	5.12	741.	5.1	8.0	27.68	0	0	0	7.1
N195	019	1977	6.8	10.70	7.45	741.	7.1	9.1	27.68	0	0	0	7.1
N195	019	1978	7.8	12.14	9.22	741.	9.1	10.0	27.68	0	0	0	7.1
N195	019	1979	8.7	13.56	12.02	741.	11.4	11.0	27.68	0	0	0	7.1
N195	020	1975	6.9	9.76	3.78	716.	5.6	7.1	28.98	0	75	0	7.1
N195	020	1976	9.0	13.29	5.09	716.	10.2	8.0	28.98	0	75	0	7.1
N195	020	1977	10.8	16.40	8.02	716.	15.6	9.1	28.98	0	75	0	7.1
N195	020	1978	11.8	18.48	9.33	716.	19.7	10.0	28.98	0	75	0	7.1
N195	020	1979	13.2	20.83	11.01	716.	25.0	11.0	28.98	0	75	0	7.1

Appendix 21. Stand growth data for Harakeke.

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N263	001	1969	346	28.3	29.0	28.7	346	32.7	31.0	31.5	19.31	29.0	269	112	9
N263	001	1971	346	28.3	29.0	28.7	346	35.2	32.0	31.9	19.31	29.0	269	112	9
N263	001	1972	346	28.3	29.0	28.7	346	37.8	33.0	32.6	19.31	29.0	269	112	9
N263	002	1969	358	54.4	29.0	32.5	346	59.8	31.0	36.8	25.68	29.0	269	112	9
N263	002	1971	358	54.4	29.0	32.5	346	62.3	32.0	37.2	25.68	29.0	269	112	9
N263	002	1972	358	54.4	29.0	32.5	309	57.6	33.0	38.8	25.68	29.0	269	112	9
N263	003	1969	371	41.2	29.0	32.9	371	46.6	31.0	33.3	23.10	29.0	269	112	9
N263	003	1971	371	41.2	29.0	32.9	371	49.2	32.0	33.3	23.10	29.0	269	112	9
N263	003	1972	371	41.2	29.0	32.9	358	49.6	33.0	36.4	23.10	29.0	269	112	9
N263	005	1969	383	45.2	29.0	38.5	383	48.6	31.0	40.3	29.11	0.0	0	0	0
N263	005	1971	383	45.2	29.0	38.5	383	50.5	32.0	41.0	29.11	0.0	0	0	0
N263	005	1972	383	45.2	29.0	38.5	383	52.2	33.0	41.7	29.11	0.0	0	0	0
N263	006	1969	593	57.8	29.0	37.2	569	60.9	31.0	39.8	27.43	0.0	0	0	0
N263	006	1971	593	57.8	29.0	37.2	569	62.9	32.0	40.1	27.43	0.0	0	0	0
N263	006	1972	593	57.8	29.0	37.2	569	64.4	33.0	40.1	27.43	0.0	0	0	0
N305	001	1972	741	1.7	4.0	5.0	741	2.7	5.1	6.0	29.88	0.0	0	0	0
N305	001	1973	741	1.7	4.0	5.0	741	10.0	9.0	12.0	29.88	0.0	0	0	0
N305	002	1972	741	1.6	4.0	4.7	741	3.0	5.1	6.0	29.52	0.0	0	0	0
N305	002	1973	741	1.6	4.0	4.7	741	11.6	9.0	13.0	29.52	0.0	0	0	0
N305	003	1972	741	2.1	4.0	5.3	741	4.4	5.1	6.7	31.74	4.0	0	112	0
N305	003	1973	741	2.1	4.0	5.3	741	20.5	9.0	13.4	31.74	4.0	0	112	0
N305	004	1972	741	1.7	4.0	5.1	741	4.1	5.1	6.2	31.25	4.0	168	0	0
N305	004	1973	741	1.7	4.0	5.1	741	17.0	9.0	13.0	31.25	4.0	168	0	0
N305	005	1972	741	2.2	4.0	5.5	741	4.3	5.1	6.6	32.40	4.0	0	112	0
N305	005	1973	741	2.2	4.0	5.5	741	17.7	9.0	12.9	32.40	4.0	0	112	0
N305	006	1972	741	1.8	4.0	5.1	741	3.8	5.1	6.5	30.80	0.0	0	0	0
N305	006	1973	741	1.8	4.0	5.1	741	17.0	9.0	13.6	30.80	0.0	0	0	0
N305	007	1972	741	1.9	4.0	5.6	741	4.5	5.1	6.6	32.56	4.0	168	0	0
N305	007	1973	741	1.9	4.0	5.6	741	18.0	9.0	13.8	32.56	4.0	168	0	0
N305	008	1972	741	1.8	4.0	5.1	741	4.7	5.1	6.1	31.26	4.0	168	112	0
N305	008	1973	741	1.8	4.0	5.1	741	19.9	9.0	12.5	31.26	4.0	168	112	0
N305	009	1972	741	1.8	4.0	6.3	741	3.9	5.1	7.5	33.66	0.0	0	0	0
N305	009	1973	741	1.8	4.0	6.3	741	21.2	9.0	15.6	33.66	0.0	0	0	0
N305	010	1972	741	2.5	4.0	6.0	741	5.6	5.1	7.6	33.76	4.0	168	112	0
N305	010	1973	741	2.5	4.0	6.0	741	22.6	9.0	15.9	33.76	4.0	168	112	0
N305	011	1972	741	2.2	4.0	6.5	741	4.5	5.1	8.2	34.91	4.0	0	112	0
N305	011	1973	741	2.2	4.0	6.5	741	20.4	9.0	14.1	34.91	4.0	0	112	0
N305	014	1972	741	3.0	4.0	6.2	741	5.0	5.1	9.1	34.13	4.0	0	112	0
N305	014	1973	741	3.0	4.0	6.2	741	21.8	9.0	15.3	34.13	4.0	0	112	0
N435	001	1975	543	3.6	7.1	8.9	543	6.3	8.1	10.6	28.87	7.1	100	25	10
N435	001	1976	543	3.6	7.1	8.9	519	9.2	9.1	12.2	28.87	7.1	100	25	10
N435	001	1977	543	3.6	7.1	8.9	519	12.2	10.8	15.1	28.87	7.1	100	25	10
N435	002	1975	543	3.6	7.1	7.5	543	6.8	8.1	9.7	26.00	7.1	100	75	10
N435	002	1976	543	3.6	7.1	7.5	543	10.3	9.1	10.8	26.00	7.1	100	75	10
N435	002	1977	543	3.6	7.1	7.5	543	14.9	10.8	15.7	26.00	7.1	100	75	10
N435	003	1975	543	4.1	7.1	7.8	543	7.0	8.1	10.5	26.65	7.1	100	75	10
N435	003	1976	543	4.1	7.1	7.8	543	10.1	9.1	12.0	26.65	7.1	100	75	10
N435	003	1977	543	4.1	7.1	7.8	543	14.1	10.8	14.1	26.65	7.1	100	75	10
N435	004	1975	543	2.5	7.1	7.9	543	4.6	8.1	9.6	26.86	7.1	100	25	10
N435	004	1976	543	2.5	7.1	7.9	494	6.2	9.1	11.4	26.86	7.1	100	25	10
N435	004	1977	543	2.5	7.1	7.9	494	9.2	10.8	14.3	26.86	7.1	100	25	10
N435	005	1975	543	2.9	7.1	8.1	543	4.5	8.1	10.2	27.27	7.1	0	0	10
N435	005	1976	543	2.9	7.1	8.1	543	6.7	9.1	11.3	27.27	7.1	0	0	10

Appendix 21. Stand growth data for Horokeke.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N435	005	1977	543	2.9	7.1	8.1	543	10.0	10.8	14.6	27.27	7.1	0	0	10
N435	006	1975	543	3.5	7.1	7.7	543	6.3	8.1	9.7	26.43	7.1	100	25	10
N435	006	1976	543	3.5	7.1	7.7	543	9.3	9.1	10.7	26.43	7.1	100	25	10
N435	006	1977	543	3.5	7.1	7.7	543	13.2	10.8	14.1	26.43	7.1	100	25	10
N435	007	1975	543	3.9	7.1	8.0	543	7.0	8.1	9.3	27.07	7.1	100	50	10
N435	007	1976	543	3.9	7.1	8.0	543	10.1	9.1	10.8	27.07	7.1	100	50	10
N435	007	1977	543	3.9	7.1	8.0	543	14.3	10.8	13.7	27.07	7.1	100	50	10
N435	008	1975	543	1.9	7.1	7.1	543	3.5	8.1	7.9	25.11	7.1	100	75	10
N435	008	1976	543	1.9	7.1	7.1	543	5.2	9.1	9.0	25.11	7.1	100	75	10
N435	008	1977	543	1.9	7.1	7.1	543	7.5	10.8	12.1	25.11	7.1	100	75	10
N435	009	1975	543	4.7	7.1	9.5	543	7.1	8.1	11.2	30.00	7.1	0	0	10
N435	009	1976	543	4.7	7.1	9.5	543	10.0	9.1	12.5	30.00	7.1	0	0	10
N435	009	1977	543	4.7	7.1	9.5	519	14.4	10.8	14.7	30.00	7.1	0	0	10
N435	010	1975	543	2.9	7.1	7.8	543	5.0	8.1	9.8	26.65	7.1	100	50	10
N435	010	1976	543	2.9	7.1	7.8	543	7.2	9.1	11.1	26.65	7.1	100	50	10
N435	010	1977	543	2.9	7.1	7.8	543	10.8	10.8	13.6	26.65	7.1	100	50	10
N435	011	1975	543	1.8	7.1	6.2	543	2.6	8.1	7.3	22.99	7.1	0	0	10
N435	011	1976	543	1.8	7.1	6.2	543	3.7	9.1	8.0	22.99	7.1	0	0	10
N435	011	1977	543	1.8	7.1	6.2	543	5.1	10.8	10.9	22.99	7.1	0	0	10
N435	012	1975	543	3.0	7.1	8.5	543	5.3	8.1	9.2	28.09	7.1	100	50	10
N435	012	1976	543	3.0	7.1	8.5	543	7.6	9.1	10.7	28.09	7.1	100	50	10
N435	012	1977	543	3.0	7.1	8.5	543	10.2	10.8	11.6	28.09	7.1	100	50	10
N191	001	1968	444	14.9	14.0	20.5	444	20.9	16.0	25.1	29.21	14.0	69	112	9
N191	001	1970	444	14.9	14.0	20.5	444	27.4	18.0	28.7	29.21	14.0	69	112	9
N191	002	1968	494	22.4	14.0	23.8	494	29.7	16.0	27.7	32.79	14.0	69	0	9
N191	002	1970	494	22.4	14.0	23.8	494	36.0	18.0	30.8	32.79	14.0	69	0	9
N191	003	1968	593	18.7	14.0	19.3	593	27.3	16.0	23.9	27.95	14.0	208	112	9
N191	003	1970	593	18.7	14.0	19.3	593	34.9	18.0	26.6	27.95	14.0	208	112	9
N191	004	1968	617	26.7	14.0	24.5	617	36.8	16.0	28.8	33.48	14.0	139	112	9
N191	004	1970	617	26.7	14.0	24.5	617	45.9	18.0	31.5	33.48	14.0	139	112	9
N191	005	1968	420	22.2	14.0	22.5	420	30.8	16.0	27.9	31.40	14.0	69	112	9
N191	005	1970	420	22.2	14.0	22.5	395	37.0	18.0	31.3	31.40	14.0	69	112	9
N191	007	1968	543	28.3	14.0	25.5	543	36.8	16.0	27.8	34.51	14.0	139	0	9
N191	007	1970	543	28.3	14.0	25.5	469	36.4	18.0	30.3	34.51	14.0	139	0	9
N191	009	1965	691	26.6	14.0	23.4	691	30.3	15.1	24.5	32.34	14.0	0	0	9
N191	009	1969	691	26.6	14.0	23.4	691	33.5	16.0	24.8	32.34	14.0	0	0	9
N191	009	1970	691	26.6	14.0	23.4	691	39.7	18.0	27.6	32.34	14.0	0	0	9
N191	010	1968	593	19.8	14.0	21.4	593	26.8	16.0	24.0	30.21	14.0	208	0	9
N191	010	1970	593	19.8	14.0	21.4	593	32.8	18.0	27.0	30.21	14.0	208	0	9
N191	011	1968	617	16.2	14.0	20.1	617	20.7	16.0	22.6	28.81	14.0	0	112	9
N191	011	1970	617	16.2	14.0	20.1	617	25.0	18.0	28.1	28.81	14.0	0	112	9
N191	012	1968	667	11.9	14.0	17.5	667	17.8	16.0	20.4	25.80	14.0	69	112	9
N191	012	1970	667	11.9	14.0	17.5	667	22.5	18.0	23.4	25.80	14.0	69	112	9
N191	013	1968	741	16.3	14.0	18.6	741	23.3	16.0	22.3	27.05	14.0	139	0	9
N191	013	1970	741	16.3	14.0	18.6	741	29.2	18.0	25.4	27.05	14.0	139	0	9
N191	014	1968	889	12.6	14.0	16.7	889	17.5	16.0	18.4	24.92	14.0	69	0	9
N191	014	1970	889	12.6	14.0	16.7	889	22.0	18.0	22.1	24.92	14.0	69	0	9
N191	015	1968	716	22.3	14.0	22.7	716	27.0	15.1	24.0	31.60	14.0	208	112	9
N191	015	1969	716	22.3	14.0	22.7	716	32.4	16.0	25.8	31.60	14.0	208	112	9
N191	016	1968	790	15.1	14.0	19.9	790	21.2	16.0	23.6	28.55	14.0	208	0	9
N191	016	1970	790	15.1	14.0	19.9	765	26.6	18.0	26.7	28.55	14.0	208	0	9
N191	018	1968	840	13.0	14.0	18.0	840	19.9	16.0	21.7	26.41	14.0	139	112	9
N191	018	1970	840	13.0	14.0	18.0	840	26.5	18.0	24.1	26.41	14.0	139	112	9

Appendix 21. Stand growth data for Harakeke.
(cont.)

REF.	PLT	YEAR	t1 N	G	A	H	t2 N	G	A	H	S	Af	Nf	Pf	Bf
N191	019	1968	617	19.4	14.0	20.4	617	27.5	16.0	25.0	29.12	14.0	139	0	9
N191	019	1970	617	19.4	14.0	20.4	617	34.5	18.0	26.7	29.12	14.0	139	0	9
N191	020	1968	840	19.7	14.0	20.3	815	35.9	16.0	26.9	28.98	14.0	139	112	9
N191	021	1968	790	22.7	14.0	22.8	790	29.3	16.0	26.7	31.69	14.0	0	112	9
N191	021	1970	790	22.7	14.0	22.8	790	36.1	18.0	29.2	31.69	14.0	0	112	9
N191	022	1968	938	18.0	14.0	20.2	938	26.3	16.0	23.8	28.91	14.0	69	112	9
N191	022	1970	938	18.0	14.0	20.2	938	33.8	18.0	26.8	28.91	14.0	69	112	9
N191	023	1968	667	21.7	14.0	22.7	667	27.3	16.0	27.4	31.69	14.0	0	0	9
N191	023	1670	667	21.7	14.0	22.7	593	29.3	18.0	28.5	31.69	14.0	0	0	9
N191	024	1968	889	17.7	14.0	18.4	889	30.2	18.0	25.3	26.88	14.0	69	0	9
N191	025	1968	593	18.9	14.0	21.1	593	26.7	16.0	26.7	29.89	14.0	208	112	9
N191	026	1968	790	15.7	14.0	18.5	790	26.5	18.0	23.9	26.99	14.0	139	112	9
N191	027	1970	741	24.4	14.0	18.5	667	34.7	18.0	30.6	27.02	14.0	139	112	9
N191	028	1968	617	15.2	14.0	19.8	568	32.5	18.0	27.3	28.42	14.0	208	112	9
N191	029	1968	790	17.4	14.0	20.1	790	29.5	18.0	25.8	28.86	14.0	208	0	9
N191	030	1968	642	28.9	14.0	24.3	642	46.8	18.0	31.1	33.31	14.0	208	0	9
N191	032	1968	617	20.4	14.0	21.2	617	31.1	18.0	28.6	30.00	14.0	0	112	9
N191	034	1968	815	18.9	14.0	21.8	790	30.6	18.0	28.2	30.68	14.0	0	112	9
N191	035	1968	716	18.3	14.0	21.8	716	24.2	16.0	23.9	30.63	14.0	139	0	9
N191	035	1970	716	18.3	14.0	21.8	617	26.0	18.0	26.4	30.63	14.0	139	0	9
N191	036	1968	691	19.5	14.0	22.6	691	24.7	16.0	26.0	31.58	14.0	0	0	9
N191	036	1970	691	19.5	14.0	22.6	691	29.4	18.0	30.1	31.58	14.0	0	0	9
N191	037	1968	765	22.4	14.0	21.3	765	28.2	16.0	24.3	30.11	14.0	0	0	9
N191	037	1970	765	22.4	14.0	21.3	741	32.7	18.0	26.6	30.11	14.0	0	0	9
N191	038	1968	617	22.7	14.0	21.6	617	30.5	16.0	25.8	30.42	14.0	139	112	9
N191	038	1970	617	22.7	14.0	21.6	593	35.7	18.0	29.5	30.42	14.0	139	112	9
N191	039	1968	642	25.7	14.0	22.9	642	33.8	16.0	27.5	31.82	14.0	69	0	9
N191	039	1970	642	25.7	14.0	22.9	642	40.1	18.0	28.1	31.82	14.0	69	0	9
N191	040	1968	765	22.5	14.0	22.6	765	30.1	16.0	28.0	31.53	14.0	139	0	9
N191	040	1970	765	22.5	14.0	22.6	741	36.3	18.0	32.0	31.53	14.0	139	0	9
N191	041	1968	716	21.9	14.0	19.3	716	29.4	16.0	23.3	27.88	14.0	69	112	9
N191	041	1970	716	21.9	14.0	19.3	716	36.0	18.0	26.1	27.88	14.0	69	112	9
N191	042	1968	716	17.5	14.0	19.8	716	23.2	16.0	22.7	28.44	14.0	0	0	9
N191	042	1970	716	17.5	14.0	19.8	716	28.7	18.0	26.1	28.44	14.0	0	0	9
N191	043	1968	815	14.1	14.0	17.6	815	16.8	15.1	18.5	25.99	14.0	0	0	9
N191	043	1969	815	14.1	14.0	17.6	815	19.2	16.0	21.0	25.99	14.0	0	0	9
N191	043	1970	815	14.1	14.0	17.6	815	24.4	18.0	23.8	25.99	14.0	0	0	9
N191	044	1968	716	11.6	14.0	18.6	716	16.3	16.0	22.9	27.06	14.0	0	112	9
N191	044	1970	716	11.6	14.0	18.6	716	22.0	18.0	24.8	27.06	14.0	0	112	9
N191	045	1968	642	17.5	14.0	19.0	642	23.3	16.0	21.7	27.62	14.0	69	0	9
N191	045	1970	642	17.5	14.0	19.0	617	27.6	18.0	25.0	27.62	14.0	69	0	9
N191	046	1968	617	16.6	14.0	19.9	617	22.7	16.0	23.5	28.64	14.0	69	112	9
N191	046	1970	617	16.6	14.0	19.9	617	27.9	18.0	25.2	28.64	14.0	69	112	9
N191	047	1968	889	16.5	14.0	19.8	889	21.8	16.0	23.5	28.49	14.0	139	0	9
N191	047	1970	889	16.5	14.0	19.8	864	26.0	18.0	25.7	28.49	14.0	139	0	9
N191	048	1968	889	14.8	14.0	18.0	889	30.0	18.0	23.5	26.44	14.0	208	112	9
N191	049	1968	716	13.6	14.0	17.1	716	19.5	16.0	20.5	25.40	14.0	208	0	9
N191	049	1970	716	13.6	14.0	17.1	716	24.9	18.0	23.2	25.40	14.0	208	0	9
N191	050	1968	815	18.7	14.0	18.9	815	28.7	16.0	22.2	27.49	14.0	208	112	9
N191	050	1970	815	18.7	14.0	18.9	815	38.7	18.0	25.9	27.49	14.0	208	112	9
N191	051	1968	815	22.5	14.0	18.9	815	31.9	16.0	22.7	27.40	14.0	208	112	9
N191	051	1970	815	22.5	14.0	18.9	765	39.6	18.0	25.7	27.40	14.0	208	112	9
N191	052	1968	667	25.5	14.0	22.3	667	33.3	16.0	24.8	31.25	14.0	0	112	9

Appendix 21. Stand growth data for Horokeke.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N191	052	1970	667	25.5	14.0	22.3	642	39.4	18.0	27.7	31.25	14.0	0	112	9
N191	053	1968	741	16.6	14.0	21.2	741	21.4	16.0	26.9	30.00	14.0	208	0	9
N191	053	1970	741	16.6	14.0	21.2	716	24.9	18.0	28.2	30.00	14.0	208	0	9
N191	054	1968	494	20.1	14.0	23.0	494	30.2	16.0	25.8	31.99	14.0	208	112	9
N191	054	1970	494	20.1	14.0	23.0	494	39.2	18.0	27.7	31.99	14.0	208	112	9
N496	710	1971	296	21.7	19.0	26.8	296	22.6	19.7	29.2	28.88	0.0	0	0	0
N496	710	1973	198	19.9	20.7	30.2	173	20.2	21.7	31.4	28.88	0.0	0	0	0
N496	710	1974	173	20.2	21.7	31.4	173	22.5	22.7	33.2	28.88	0.0	0	0	0
N496	710	1976	123	17.2	23.7	34.0	123	19.9	25.8	34.2	28.88	0.0	0	0	0
N496	711	1972	370	35.7	19.7	31.1	370	38.7	20.7	32.1	31.21	0.0	0	0	0
N496	711	1973	370	38.7	20.7	32.1	346	38.8	21.7	32.6	31.21	0.0	0	0	0
N496	711	1974	346	38.8	21.7	32.6	346	41.7	22.7	34.8	31.21	0.0	0	0	0
N496	711	1975	346	41.7	22.7	34.8	346	44.2	23.7	35.9	31.21	0.0	0	0	0
N496	711	1976	346	44.2	23.7	35.9	346	48.8	25.8	37.5	31.21	0.0	0	0	0
N496	713	1971	790	10.2	11.1	13.5	790	11.6	11.7	14.4	25.70	0.0	0	0	0
N496	713	1972	790	11.6	11.7	14.4	790	15.2	12.7	15.4	25.70	0.0	0	0	0
N496	713	1973	790	15.2	12.7	15.4	765	17.5	13.7	16.4	25.70	0.0	0	0	0
N496	713	1974	765	17.5	13.7	16.4	765	21.1	14.7	17.9	25.70	0.0	0	0	0
N496	713	1975	765	21.1	14.7	17.9	765	25.1	15.7	19.5	25.70	0.0	0	0	0
N496	713	1976	765	25.1	15.7	19.5	765	32.6	17.8	22.7	25.70	0.0	0	0	0
N496	713	1978	765	32.6	17.8	22.7	765	39.0	19.7	25.9	25.70	0.0	0	0	0
N496	713	1980	765	39.0	19.7	25.9	765	44.7	21.7	28.0	25.70	0.0	0	0	0
N496	712	1971	1506	27.6	12.7	16.1	1506	31.5	13.7	17.6	26.30	0.0	0	0	0
N496	712	1972	1506	31.5	13.7	17.6	1506	35.3	14.7	19.1	26.30	0.0	0	0	0
N496	712	1973	1506	35.3	14.7	19.1	1506	37.8	15.7	20.2	26.30	0.0	0	0	0
N496	712	1974	1506	37.8	15.7	20.2	1506	41.9	16.7	22.6	26.30	0.0	0	0	0
N496	712	1975	1506	41.9	16.7	22.6	1506	45.6	17.7	23.4	26.30	0.0	0	0	0
N496	712	1978	1062	37.7	19.8	26.2	889	37.7	21.7	27.1	26.30	0.0	0	0	0
N496	725	1972	716	23.3	16.7	24.0	716	26.1	17.7	25.5	28.05	0.0	0	0	0
N496	725	1973	716	26.1	17.7	25.5	691	27.8	18.7	26.1	28.05	0.0	0	0	0
N496	725	1974	691	27.8	18.7	26.1	691	30.3	19.7	27.9	28.05	0.0	0	0	0
N496	725	1975	691	30.3	19.7	27.9	691	32.9	20.7	29.6	28.05	0.0	0	0	0
N496	725	1976	691	32.9	20.7	29.6	691	37.1	22.8	30.9	28.05	0.0	0	0	0
N496	725	1978	691	37.1	22.8	30.9	642	40.7	24.7	32.4	28.05	0.0	0	0	0
N496	720	1972	617	40.5	17.8	27.1	617	44.1	18.7	29.3	31.96	0.0	0	0	0
N496	720	1973	617	44.1	18.7	29.3	593	45.8	19.7	31.8	31.96	0.0	0	0	0
N496	720	1974	593	45.8	19.7	31.8	593	49.3	20.7	33.2	31.96	0.0	0	0	0
N496	720	1975	593	49.3	20.7	33.2	593	52.0	21.7	34.7	31.96	0.0	0	0	0
N496	720	1976	593	52.0	21.7	34.7	568	57.1	23.8	37.2	31.96	0.0	0	0	0
N496	720	1978	568	57.1	23.8	37.2	568	62.2	25.7	38.9	31.96	0.0	0	0	0
N496	721	1972	1852	10.8	8.8	13.2	1802	14.0	9.7	14.1	28.18	0.0	0	0	0
N496	721	1973	1802	14.0	9.7	14.1	1802	16.9	10.7	15.6	28.18	0.0	0	0	0
N496	721	1974	1802	16.9	10.7	15.6	1802	21.3	11.7	16.7	28.18	0.0	0	0	0
N496	721	1975	1802	21.3	11.7	16.7	1802	25.4	12.7	17.5	28.18	0.0	0	0	0
N496	721	1976	1802	25.4	12.7	17.5	1778	31.7	14.8	19.5	28.18	0.0	0	0	0
N496	721	1978	1778	31.7	14.8	19.5	1778	37.8	16.7	20.7	28.18	0.0	0	0	0
N496	721	1980	1778	37.8	16.7	20.7	1753	44.9	18.7	23.1	28.18	0.0	0	0	0
N496	722	1972	1111	15.0	14.8	19.1	1111	18.1	15.7	20.7	26.44	0.0	0	0	0
N496	722	1973	1111	18.1	15.7	20.7	1086	20.1	16.7	21.9	26.44	0.0	0	0	0
N496	722	1974	1086	20.1	16.7	21.9	1086	23.2	17.8	24.3	26.44	0.0	0	0	0
N496	722	1975	1086	23.2	17.8	24.3	1086	25.3	18.7	25.1	26.44	0.0	0	0	0
N496	722	1980	642	28.4	22.7	29.9	593	31.0	24.7	30.8	26.44	0.0	0	0	0
N496	723	1972	864	38.1	15.8	23.9	864	41.9	16.7	25.3	28.81	0.0	0	0	0

Appendix 21. Stand growth data for Horokeke.
(cont.)

REF.	PLT	YEAR	t1 N	t1 G	t1 A	t1 H	t2 N	t2 G	t2 A	t2 H	S	Af	Nf	Pf	Bf
N496	723	1974	420	30.9	17.7	26.4	420	34.2	18.7	28.0	28.81	0.0	0	0	0
N496	723	1975	420	34.2	18.7	28.0	420	37.0	19.7	28.9	28.81	0.0	0	0	0
N496	723	1976	420	37.0	19.7	28.9	420	43.1	21.8	29.9	28.81	0.0	0	0	0
N496	723	1978	420	43.1	21.8	29.9	395	46.9	23.7	32.0	28.81	0.0	0	0	0
N496	723	1980	395	46.9	23.7	32.0	395	51.0	25.7	34.2	28.81	0.0	0	0	0
N496	721	1972	667	38.7	20.8	30.5	667	41.5	21.7	32.1	29.84	0.0	0	0	0
N496	721	1973	667	41.5	21.7	32.1	667	43.0	22.7	33.0	29.84	0.0	0	0	0
N496	721	1974	667	43.0	22.7	33.0	667	47.1	23.8	35.4	29.84	0.0	0	0	0
N496	721	1975	667	47.1	23.8	35.4	617	46.6	24.7	36.4	29.84	0.0	0	0	0
N496	721	1976	617	46.6	24.7	36.4	568	49.3	26.8	37.0	29.84	0.0	0	0	0
N496	721	1978	568	49.3	26.8	37.0	568	52.7	28.7	37.7	29.84	0.0	0	0	0
N496	722	1972	988	25.5	10.8	17.8	988	29.3	11.7	19.8	31.40	0.0	0	0	0
N496	722	1973	988	29.3	11.7	19.8	988	31.7	12.7	21.5	31.40	0.0	0	0	0
N496	722	1974	988	31.7	12.7	21.5	988	36.2	13.8	23.0	31.40	0.0	0	0	0
N496	722	1975	988	36.2	13.8	23.0	963	38.9	14.7	23.9	31.40	0.0	0	0	0
N496	722	1978	321	23.1	16.8	26.0	321	28.5	18.7	28.3	31.40	0.0	0	0	0
N496	722	1980	321	28.5	18.7	28.3	321	34.0	20.7	28.6	31.40	0.0	0	0	0
N496	723	1972	198	48.4	28.8	43.1	198	50.2	29.7	44.2	37.70	0.0	0	0	0
N496	723	1973	198	50.2	29.7	44.2	198	51.8	30.7	45.8	37.70	0.0	0	0	0
N496	723	1974	198	51.8	30.7	45.8	198	53.9	31.8	48.0	37.70	0.0	0	0	0
N496	723	1975	198	53.9	31.8	48.0	198	55.6	32.8	49.0	37.70	0.0	0	0	0
N496	724	1973	444	27.5	19.8	29.7	444	29.2	20.7	31.3	28.34	0.0	0	0	0
N496	724	1974	444	33.1	21.8	31.1	420	33.3	22.7	32.0	28.34	0.0	0	0	0
N496	724	1976	420	33.3	22.7	32.0	420	40.4	24.8	32.7	28.34	0.0	0	0	0
N496	724	1978	420	40.4	24.8	32.7	420	46.0	26.7	33.2	28.34	0.0	0	0	0
N496	727	1974	494	13.1	13.8	20.8	494	16.2	14.9	21.3	28.21	0.0	0	0	0
N496	727	1975	494	16.2	14.9	21.3	420	16.0	15.8	22.9	28.21	0.0	0	0	0
N496	727	1976	420	16.0	15.8	22.9	420	22.2	17.8	23.9	28.21	0.0	0	0	0
N496	727	1978	420	22.2	17.8	23.9	420	26.8	19.7	25.4	28.21	0.0	0	0	0
N496	727	1980	420	26.8	19.7	25.4	420	31.4	21.7	31.4	28.21	0.0	0	0	0
N496	809	1980	683	13.8	14.0	18.5	683	15.6	15.0	19.8	26.42	0.0	0	0	0
N496	809	1981	683	15.6	15.0	19.8	683	19.8	17.0	21.5	26.42	0.0	0	0	0
N496	803	1980	567	19.6	11.0	18.2	567	22.2	12.0	19.3	32.09	0.0	0	0	0
N496	811	1981	467	4.7	10.0	11.0	467	6.3	11.0	11.8	24.47	0.0	0	0	0
N496	821	1982	333	12.7	10.0	15.4	333	16.7	11.0	17.1	31.23	0.0	0	0	0
N498	001	1980	500	10.4	7.1	11.3	500	14.2	8.1	12.8	32.70	0.0	0	0	0
N498	001	1981	500	14.2	8.1	12.8	500	18.7	9.1	14.7	32.70	0.0	0	0	0
N498	002	1980	383	6.9	7.1	10.9	383	10.1	8.1	12.6	32.43	0.0	0	0	0
N498	002	1981	383	10.1	8.1	12.6	383	14.0	9.1	14.8	32.43	0.0	0	0	0
N498	003	1980	250	5.7	7.1	10.8	250	8.2	8.1	12.3	31.73	0.0	0	0	0
N498	003	1981	250	8.2	8.1	12.3	250	11.6	9.1	13.7	31.73	0.0	0	0	0
N498	004	1980	750	16.5	7.1	12.6	750	20.6	8.1	14.1	34.51	0.0	0	0	0
N498	004	1981	750	20.6	8.1	14.1	750	25.8	9.1	16.0	34.51	0.0	0	0	0
N498	005	1980	383	6.5	7.1	11.1	383	9.1	8.1	12.1	32.11	0.0	0	0	0
N498	005	1981	383	9.1	8.1	12.1	383	12.7	9.1	14.4	32.11	0.0	0	0	0
N498	006	1980	500	9.0	7.1	11.1	500	12.6	8.1	12.4	32.44	0.0	0	0	0
N498	006	1981	500	12.6	8.1	12.4	483	16.9	9.1	14.8	32.44	0.0	0	0	0
N496	007	1980	750	12.6	7.1	12.4	750	16.0	8.1	13.3	33.76	0.0	0	0	0
N496	007	1981	750	16.0	8.1	13.3	750	20.9	9.1	15.3	33.76	0.0	0	0	0
N496	008	1980	250	5.9	7.1	12.7	250	8.3	8.1	13.7	33.78	0.0	0	0	0
N496	008	1981	250	8.3	8.1	13.7	250	11.5	9.1	14.6	33.78	0.0	0	0	0
N496	009	1980	500	7.9	7.1	11.5	500	11.2	8.1	13.2	33.22	0.0	0	0	0
N496	009	1981	500	11.2	8.1	13.2	500	15.4	9.1	15.2	33.22	0.0	0	0	0

Appendix 21. Stand growth data for Horokeke.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N496	010	1980	250	3.6	7.1	10.4	250	4.8	8.1	11.7	31.15	0.0	0	0	0
N496	010	1981	250	4.8	8.1	11.7	233	7.3	9.1	13.6	31.15	0.0	0	0	0
N496	011	1980	383	5.8	7.1	12.0	367	7.4	8.1	13.9	34.17	0.0	0	0	0
N496	011	1981	367	7.4	8.1	13.9	350	10.4	9.1	16.1	34.17	0.0	0	0	0
N496	012	1980	750	14.4	7.1	11.5	750	18.5	8.1	13.1	33.17	0.0	0	0	0
N496	012	1981	750	18.5	8.1	13.1	750	23.9	9.1	15.2	33.17	0.0	0	0	0

Appendix 22. Sectional measurement data for Harakeke.
(80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	001	013	1973	43.2	47.5	0.00	43.9	30.77
N263	001	013	1973	40.9	45.7	0.70	43.9	30.77
N263	001	013	1973	38.6	43.9	1.40	43.9	30.77
N263	001	013	1973	37.2	41.4	2.80	43.9	30.77
N263	001	013	1973	34.7	38.4	4.54	43.9	30.77
N263	001	013	1973	32.6	36.3	6.28	43.9	30.77
N263	001	013	1973	31.0	33.8	9.45	43.9	30.77
N263	001	013	1973	28.3	31.2	13.41	43.9	30.77
N263	001	013	1973	21.2	23.6	18.75	43.9	30.77
N263	001	013	1973	18.8	21.1	19.87	43.9	30.77
N263	001	013	1973	16.3	18.5	21.24	43.9	30.77
N263	001	013	1973	13.8	16.0	22.40	43.9	30.77
N263	001	013	1973	9.0	10.9	25.09	43.9	30.77
N263	001	013	1973	6.9	8.4	25.82	43.9	30.77
N263	001	017	1973	39.0	45.4	0.00	42.4	30.77
N263	001	017	1973	37.2	43.9	0.70	42.4	30.77
N263	001	017	1973	35.3	42.4	1.40	42.4	30.77
N263	001	017	1973	32.3	38.4	2.44	42.4	30.77
N263	001	017	1973	33.1	37.3	3.81	42.4	30.77
N263	001	017	1973	31.1	34.8	7.01	42.4	30.77
N263	001	017	1973	29.2	32.3	9.66	42.4	30.77
N263	001	017	1973	25.5	27.2	15.36	42.4	30.77
N263	001	017	1973	22.8	24.6	18.04	42.4	30.77
N263	001	017	1973	19.9	22.1	19.96	42.4	30.77
N263	001	017	1973	15.9	17.8	23.47	42.4	30.77
N263	001	017	1973	10.5	11.9	25.69	42.4	30.77
N263	001	017	1973	8.4	9.4	26.58	42.4	30.77
N263	001	019	1973	42.1	52.3	0.00	48.3	34.75
N263	001	019	1973	42.9	50.3	0.70	48.3	34.75
N263	001	019	1973	43.7	48.3	1.40	48.3	34.75
N263	001	019	1973	40.7	45.7	2.41	48.3	34.75
N263	001	019	1973	38.5	43.2	3.54	48.3	34.75
N263	001	019	1973	37.0	40.6	5.64	48.3	34.75
N263	001	019	1973	35.8	38.1	7.86	48.3	34.75
N263	001	019	1973	33.1	35.6	10.24	48.3	34.75
N263	001	019	1973	30.5	33.0	13.90	48.3	34.75
N263	001	019	1973	23.2	25.4	20.94	48.3	34.75
N263	001	019	1973	18.1	20.3	25.18	48.3	34.75
N263	001	019	1973	16.3	17.8	26.61	48.3	34.75
N263	001	019	1973	13.4	15.2	28.01	48.3	34.75
N263	001	021	1973	33.9	38.6	0.00	26.4	26.66
N263	001	021	1973	28.1	32.5	0.70	26.4	26.66
N263	001	021	1973	22.2	26.4	1.40	26.4	26.66
N263	001	021	1973	22.1	23.9	3.20	26.4	26.66
N263	001	021	1973	19.6	21.3	5.94	26.4	26.66
N263	001	021	1973	17.3	18.8	11.67	26.4	26.66
N263	001	021	1973	14.8	16.3	16.34	26.4	26.66
N263	001	021	1973	10.1	11.2	21.24	26.4	26.66
N263	001	021	1973	7.6	8.6	22.25	26.4	26.66
N263	001	022	1973	31.2	38.6	0.70	37.1	30.77
N263	001	022	1973	30.5	37.1	1.40	37.1	30.77
N263	001	022	1973	29.1	32.0	4.08	37.1	30.77

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	001	022	1973	27.2	29.5	6.19	37.1	30.77
N263	001	022	1973	24.6	26.9	10.97	37.1	30.77
N263	001	022	1973	23.0	24.4	14.81	37.1	30.77
N263	001	022	1973	20.8	21.8	19.54	37.1	30.77
N263	001	022	1973	18.2	19.3	21.55	37.1	30.77
N263	001	022	1973	15.5	16.8	24.23	37.1	30.77
N263	001	022	1973	12.7	14.2	25.66	37.1	30.77
N263	001	022	1973	10.4	11.7	27.01	37.1	30.77
N263	002	005	1973	30.9	37.3	0.00	35.3	34.89
N263	002	005	1973	27.8	32.8	2.16	35.3	34.89
N263	002	005	1973	27.7	30.2	4.57	35.3	34.89
N263	002	005	1973	26.4	27.7	7.62	35.3	34.89
N263	002	005	1973	24.0	25.1	13.56	35.3	34.89
N263	002	005	1973	21.5	22.6	18.17	35.3	34.89
N263	002	005	1973	18.8	20.1	20.91	35.3	34.89
N263	002	005	1973	14.0	15.0	26.58	35.3	34.89
N263	002	005	1973	11.6	12.4	28.50	35.3	34.89
N263	002	005	1973	9.0	9.9	29.93	35.3	34.89
N263	002	006	1973	62.6	70.1	0.70	67.8	41.75
N263	002	006	1973	60.3	67.8	1.40	67.8	41.75
N263	002	006	1973	57.8	65.3	2.13	67.8	41.75
N263	002	006	1973	56.1	62.7	3.51	67.8	41.75
N263	002	006	1973	54.2	60.2	4.88	67.8	41.75
N263	002	006	1973	52.7	57.7	6.55	67.8	41.75
N263	002	006	1973	50.0	55.1	8.11	67.8	41.75
N263	002	006	1973	48.5	52.6	10.21	67.8	41.75
N263	002	006	1973	45.9	50.0	12.25	67.8	41.75
N263	002	006	1973	43.9	47.5	14.36	67.8	41.75
N263	002	006	1973	42.0	45.0	16.52	67.8	41.75
N263	002	006	1973	39.6	42.4	18.41	67.8	41.75
N263	002	006	1973	34.9	37.3	22.59	67.8	41.75
N263	002	006	1973	32.3	34.8	24.38	67.8	41.75
N263	002	006	1973	24.7	27.2	29.23	67.8	41.75
N263	002	006	1973	22.6	24.6	31.36	67.8	41.75
N263	002	006	1973	20.1	22.1	32.64	67.8	41.75
N263	002	006	1973	17.8	19.6	33.56	67.8	41.75
N263	002	006	1973	16.3	17.8	34.50	67.8	41.75
N263	002	006	1973	10.5	11.9	36.79	67.8	41.75
N263	002	006	1973	8.4	9.4	37.67	67.8	41.75
N263	002	007	1973	33.6	39.4	0.00	34.8	30.77
N263	002	007	1973	31.1	37.1	0.70	34.8	30.77
N263	002	007	1973	28.1	32.3	2.56	34.8	30.77
N263	002	007	1973	26.0	29.7	3.47	34.8	30.77
N263	002	007	1973	24.8	27.2	7.04	34.8	30.77
N263	002	007	1973	22.3	24.6	9.85	34.8	30.77
N263	002	007	1973	15.2	17.0	20.82	34.8	30.77
N263	002	007	1973	13.0	14.5	22.98	34.8	30.77
N263	002	007	1973	10.6	11.9	23.32	34.8	30.77
N263	002	007	1973	8.4	9.4	25.21	34.8	30.77
N263	002	027	1973	53.7	60.8	0.00	56.6	36.72
N263	002	027	1973	51.6	58.7	0.70	56.6	36.72
N263	002	027	1973	49.5	56.6	1.40	56.6	36.72

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	002	027	1973	44.5	51.6	3.08	56.6	36.72
N263	002	027	1973	43.0	49.0	4.24	56.6	36.72
N263	002	027	1973	41.5	46.5	5.67	56.6	36.72
N263	002	027	1973	40.1	43.9	7.38	56.6	36.72
N263	002	027	1973	37.7	41.4	9.42	56.6	36.72
N263	002	027	1973	35.7	38.9	12.59	56.6	36.72
N263	002	027	1973	31.1	33.8	17.37	56.6	36.72
N263	002	027	1973	28.7	31.2	20.88	56.6	36.72
N263	002	027	1973	26.7	28.7	22.62	56.6	36.72
N263	002	027	1973	24.4	26.2	24.75	56.6	36.72
N263	002	027	1973	17.0	18.5	29.11	56.6	36.72
N263	002	027	1973	14.7	16.0	29.78	56.6	36.72
N263	002	027	1973	12.2	13.5	30.85	56.6	36.72
N263	002	027	1973	9.9	10.9	32.10	56.6	36.72
N263	002	027	1973	7.5	8.4	33.31	56.6	36.72
N263	003	005	1973	26.6	31.7	0.70	29.7	29.71
N263	003	005	1973	23.1	27.2	2.74	29.7	29.71
N263	003	005	1973	22.1	24.6	5.24	29.7	29.71
N263	003	005	1973	19.9	22.1	9.51	29.7	29.71
N263	003	005	1973	18.1	19.6	14.05	29.7	29.71
N263	003	005	1973	15.0	17.0	18.14	29.7	29.71
N263	003	005	1973	13.0	14.5	21.46	29.7	29.71
N263	003	005	1973	10.4	11.9	23.29	29.7	29.71
N263	003	005	1973	8.4	9.4	25.45	29.7	29.71
N263	003	007	1973	46.0	54.1	0.70	51.6	37.18
N263	003	007	1973	44.2	51.6	1.40	51.6	37.18
N263	003	007	1973	43.5	49.0	2.23	51.6	37.18
N263	003	007	1973	40.6	43.9	5.27	51.6	37.18
N263	003	007	1973	38.5	41.4	7.68	51.6	37.18
N263	003	007	1973	33.8	36.3	13.01	51.6	37.18
N263	003	007	1973	31.3	33.8	15.94	51.6	37.18
N263	003	007	1973	29.2	31.2	19.02	51.6	37.18
N263	003	007	1973	26.4	28.7	22.01	51.6	37.18
N263	003	007	1973	24.2	26.2	24.08	51.6	37.18
N263	003	007	1973	21.7	23.6	26.27	51.6	37.18
N263	003	007	1973	19.3	21.1	28.22	51.6	37.18
N263	003	007	1973	16.5	18.5	29.50	51.6	37.18
N263	003	007	1973	12.0	13.5	32.16	51.6	37.18
N263	003	007	1973	9.5	10.9	33.22	51.6	37.18
N263	003	007	1973	7.3	8.4	34.14	51.6	37.18
N263	003	019	1973	51.2	59.8	0.00	54.4	33.52
N263	003	019	1973	47.0	54.4	1.40	54.4	33.52
N263	003	019	1973	44.3	51.8	2.10	54.4	33.52
N263	003	019	1973	42.2	49.3	3.08	54.4	33.52
N263	003	019	1973	40.9	46.7	4.15	54.4	33.52
N263	003	019	1973	40.3	44.2	6.71	54.4	33.52
N263	003	019	1973	38.4	41.7	10.36	54.4	33.52
N263	003	019	1973	35.3	39.1	12.95	54.4	33.52
N263	003	019	1973	33.2	36.6	16.31	54.4	33.52
N263	003	019	1973	30.7	34.0	18.01	54.4	33.52
N263	003	019	1973	28.5	31.5	20.12	54.4	33.52
N263	003	019	1973	26.3	29.0	22.01	54.4	33.52

Appendix 22. Sectional measurement data for Horokeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	003	019	1973	24.0	26.4	24.54	54.4	33.52
N263	003	019	1973	21.4	23.9	25.63	54.4	33.52
N263	003	019	1973	19.1	21.3	27.55	54.4	33.52
N263	003	019	1973	14.8	17.0	28.59	54.4	33.52
N263	003	019	1973	7.6	8.6	31.12	54.4	33.52
N263	003	022	1973	47.4	57.6	0.00	53.6	35.80
N263	003	022	1973	44.2	53.6	1.40	53.6	35.80
N263	003	022	1973	41.6	48.5	3.32	53.6	35.80
N263	003	022	1973	39.8	46.0	4.79	53.6	35.80
N263	003	022	1973	39.5	43.4	7.01	53.6	35.80
N263	003	022	1973	37.5	40.9	9.11	53.6	35.80
N263	003	022	1973	35.2	38.4	11.25	53.6	35.80
N263	003	022	1973	32.8	35.8	14.45	53.6	35.80
N263	003	022	1973	30.4	33.3	17.28	53.6	35.80
N263	003	022	1973	28.2	30.7	19.11	53.6	35.80
N263	003	022	1973	23.2	25.7	23.20	53.6	35.80
N263	003	022	1973	18.4	20.6	26.43	53.6	35.80
N263	003	022	1973	16.0	18.0	27.74	53.6	35.80
N263	003	022	1973	13.9	15.5	28.93	53.6	35.80
N263	003	022	1973	11.5	13.0	30.18	53.6	35.80
N263	003	022	1973	9.1	10.4	31.03	53.6	35.80
N263	003	022	1973	6.9	7.9	32.16	53.6	35.80
N263	003	023	1973	23.4	30.4	0.00	25.4	24.98
N263	003	023	1973	21.5	27.9	0.70	25.4	24.98
N263	003	023	1973	19.7	25.4	1.40	25.4	24.98
N263	003	023	1973	18.8	22.9	2.50	25.4	24.98
N263	003	023	1973	15.9	17.8	9.60	25.4	24.98
N263	003	023	1973	13.7	15.2	14.78	25.4	24.98
N263	003	023	1973	8.8	10.2	20.94	25.4	24.98
N263	003	023	1973	6.6	7.6	23.71	25.4	24.98
N263	004	006	1973	52.3	59.4	0.00	54.4	35.36
N263	004	006	1973	45.4	51.8	2.29	54.4	35.36
N263	004	006	1973	43.8	49.3	3.17	54.4	35.36
N263	004	006	1973	40.1	44.2	7.10	54.4	35.36
N263	004	006	1973	37.4	41.7	9.51	54.4	35.36
N263	004	006	1973	35.2	39.1	11.80	54.4	35.36
N263	004	006	1973	33.6	36.6	14.08	54.4	35.36
N263	004	006	1973	31.0	34.0	17.89	54.4	35.36
N263	004	006	1973	28.5	31.5	19.11	54.4	35.36
N263	004	006	1973	26.2	29.0	20.70	54.4	35.36
N263	004	006	1973	23.7	26.4	22.77	54.4	35.36
N263	004	006	1973	21.9	23.9	24.38	54.4	35.36
N263	004	006	1973	18.9	21.3	25.88	54.4	35.36
N263	004	006	1973	16.3	18.8	27.86	54.4	35.36
N263	004	006	1973	13.9	16.3	29.23	54.4	35.36
N263	004	006	1973	11.8	13.7	30.39	54.4	35.36
N263	004	006	1973	7.1	8.6	32.25	54.4	35.36
N263	004	010	1973	14.2	21.6	0.00	19.6	24.83
N263	004	010	1973	14.5	19.6	1.40	19.6	24.83
N263	004	010	1973	14.5	17.0	2.93	19.6	24.83
N263	004	010	1973	13.0	14.5	6.46	19.6	24.83
N263	004	010	1973	10.6	11.9	12.41	19.6	24.83

Appendix 22. Sectional measurement data for Horokeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	004	010	1973	8.4	9.4	17.62	19.6	24.83
N263	004	015	1973	42.7	50.8	0.70	48.3	37.48
N263	004	015	1973	40.7	48.3	1.40	48.3	37.48
N263	004	015	1973	37.4	45.7	2.13	48.3	37.48
N263	004	015	1973	36.0	43.2	3.23	48.3	37.48
N263	004	015	1973	34.6	40.6	4.39	48.3	37.48
N263	004	015	1973	32.9	38.1	6.68	48.3	37.48
N263	004	015	1973	26.8	30.5	15.51	48.3	37.48
N263	004	015	1973	24.9	27.9	18.26	48.3	37.48
N263	004	015	1973	22.7	25.4	20.76	48.3	37.48
N263	004	015	1973	20.4	22.9	23.65	48.3	37.48
N263	004	015	1973	17.9	20.3	25.88	48.3	37.48
N263	004	015	1973	15.5	17.8	27.80	48.3	37.48
N263	004	015	1973	12.5	14.0	29.57	48.3	37.48
N263	004	015	1973	11.6	12.7	30.94	48.3	37.48
N263	004	015	1973	9.2	10.2	32.46	48.3	37.48
N263	004	020	1973	22.0	29.1	0.00	26.7	28.34
N263	004	020	1973	21.2	27.9	0.70	26.7	28.34
N263	004	020	1973	18.9	21.6	3.26	26.7	28.34
N263	004	020	1973	16.6	19.0	7.68	26.7	28.34
N263	004	020	1973	14.3	16.5	12.92	26.7	28.34
N263	004	020	1973	11.8	14.0	17.22	26.7	28.34
N263	004	020	1973	9.7	11.4	21.00	26.7	28.34
N263	004	020	1973	7.6	8.9	23.07	26.7	28.34
N263	005	002	1973	26.2	35.6	0.00	31.0	33.82
N263	005	002	1973	25.4	33.3	0.70	31.0	33.82
N263	005	002	1973	23.3	28.4	2.59	31.0	33.82
N263	005	002	1973	22.7	25.9	4.57	31.0	33.82
N263	005	002	1973	18.4	20.8	13.01	31.0	33.82
N263	005	002	1973	16.4	18.3	17.07	31.0	33.82
N263	005	002	1973	14.2	15.7	20.54	31.0	33.82
N263	005	002	1973	11.7	13.2	23.93	31.0	33.82
N263	005	002	1973	9.2	10.7	26.97	31.0	33.82
N263	005	002	1973	7.1	8.1	28.80	31.0	33.82
N263	005	005	1973	27.6	38.9	0.00	33.3	34.75
N263	005	005	1973	26.3	36.1	0.70	33.3	34.75
N263	005	005	1973	24.5	30.7	1.98	33.3	34.75
N263	005	005	1973	22.5	28.2	3.60	33.3	34.75
N263	005	005	1973	22.0	25.7	5.46	33.3	34.75
N263	005	005	1973	18.2	20.6	14.36	33.3	34.75
N263	005	005	1973	16.0	18.0	18.14	33.3	34.75
N263	005	005	1973	14.0	15.5	21.67	33.3	34.75
N263	005	005	1973	11.7	13.0	24.20	33.3	34.75
N263	005	005	1973	6.8	7.9	30.05	33.3	34.75
N263	005	026	1973	49.7	61.4	0.00	57.4	42.67
N263	005	026	1973	49.0	59.4	0.70	57.4	42.67
N263	005	026	1973	48.3	57.4	1.40	57.4	42.67
N263	005	026	1973	44.7	52.3	3.72	57.4	42.67
N263	005	026	1973	43.8	49.8	5.18	57.4	42.67
N263	005	026	1973	42.1	47.2	7.13	57.4	42.67
N263	005	026	1973	38.1	42.2	12.28	57.4	42.67
N263	005	026	1973	35.9	39.6	14.17	57.4	42.67

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	005	026	1973	33.7	37.1	16.52	57.4	42.67
N263	005	026	1973	28.8	32.0	21.18	57.4	42.67
N263	005	026	1973	26.6	29.5	23.29	57.4	42.67
N263	005	026	1973	24.2	26.9	25.54	57.4	42.67
N263	005	026	1973	22.0	24.4	27.80	57.4	42.67
N263	005	026	1973	19.6	21.8	29.93	57.4	42.67
N263	005	026	1973	17.3	19.3	31.30	57.4	42.67
N263	005	026	1973	15.0	16.8	33.35	57.4	42.67
N263	005	026	1973	12.8	14.2	34.96	57.4	42.67
N263	005	026	1973	10.7	11.7	36.21	57.4	42.67
N263	005	029	1973	56.7	67.0	0.00	59.4	43.42
N263	005	029	1973	53.5	63.2	0.70	59.4	43.42
N263	005	029	1973	50.4	59.4	1.40	59.4	43.42
N263	005	029	1973	47.6	56.9	1.80	59.4	43.42
N263	005	029	1973	45.5	54.4	2.62	59.4	43.42
N263	005	029	1973	43.3	51.8	3.41	59.4	43.42
N263	005	029	1973	42.4	49.3	5.52	59.4	43.42
N263	005	029	1973	37.1	41.7	14.20	59.4	43.42
N263	005	029	1973	35.2	39.1	16.31	59.4	43.42
N263	005	029	1973	33.0	36.6	18.26	59.4	43.42
N263	005	029	1973	30.4	34.0	20.54	59.4	43.42
N263	005	029	1973	28.8	31.5	23.41	59.4	43.42
N263	005	029	1973	26.5	29.0	25.09	59.4	43.42
N263	005	029	1973	24.1	26.4	27.74	59.4	43.42
N263	005	029	1973	18.8	21.3	31.39	59.4	43.42
N263	005	029	1973	12.2	13.7	35.81	59.4	43.42
N263	005	029	1973	9.7	11.2	37.61	59.4	43.42
N263	005	029	1973	7.1	8.6	39.26	59.4	43.42
N263	006	005	1973	48.6	58.0	0.00	52.8	38.09
N263	006	005	1973	44.7	52.8	1.40	52.8	38.09
N263	006	005	1973	42.4	50.5	2.01	52.8	38.09
N263	006	005	1973	41.9	48.0	3.17	52.8	38.09
N263	006	005	1973	40.5	45.5	4.42	52.8	38.09
N263	006	005	1973	38.7	42.9	7.01	52.8	38.09
N263	006	005	1973	36.5	40.4	10.24	52.8	38.09
N263	006	005	1973	32.1	35.3	16.46	52.8	38.09
N263	006	005	1973	25.7	27.7	22.92	52.8	38.09
N263	006	005	1973	23.1	25.1	24.87	52.8	38.09
N263	006	005	1973	21.5	23.4	26.67	52.8	38.09
N263	006	005	1973	17.7	19.6	28.74	52.8	38.09
N263	006	005	1973	15.4	17.0	30.30	52.8	38.09
N263	006	005	1973	13.2	14.5	31.33	52.8	38.09
N263	006	005	1973	10.6	11.9	32.46	52.8	38.09
N263	006	005	1973	8.4	9.4	33.59	52.8	38.09
N263	006	008	1973	47.9	56.8	0.00	50.8	42.81
N263	006	008	1973	45.9	53.8	0.70	50.8	42.81
N263	006	008	1973	39.2	45.7	2.74	50.8	42.81
N263	006	008	1973	38.9	43.2	4.15	50.8	42.81
N263	006	008	1973	37.7	40.6	6.92	50.8	42.81
N263	006	008	1973	35.7	38.1	10.06	50.8	42.81
N263	006	008	1973	33.3	35.6	13.32	50.8	42.81
N263	006	008	1973	30.7	33.0	16.52	50.8	42.81

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	006	008	1973	28.7	30.5	18.96	50.8	42.81
N263	006	008	1973	26.4	27.9	21.73	50.8	42.81
N263	006	008	1973	23.9	25.4	24.63	50.8	42.81
N263	006	008	1973	21.4	22.9	27.28	50.8	42.81
N263	006	008	1973	18.9	20.3	30.02	50.8	42.81
N263	006	008	1973	16.4	17.8	32.43	50.8	42.81
N263	006	008	1973	14.2	15.2	34.41	50.8	42.81
N263	006	008	1973	6.6	7.6	39.32	50.8	42.81
N263	006	032	1973	22.1	28.7	0.00	25.7	29.86
N263	006	032	1973	21.9	27.2	0.70	25.7	29.86
N263	006	032	1973	21.6	25.7	1.40	25.7	29.86
N263	006	032	1973	19.9	23.1	2.77	25.7	29.86
N263	006	032	1973	19.1	20.6	5.94	25.7	29.86
N263	006	032	1973	17.0	18.0	11.25	25.7	29.86
N263	006	032	1973	12.0	13.0	19.14	25.7	29.86
N263	006	032	1973	9.4	10.4	22.56	25.7	29.86
N263	006	043	1973	18.1	24.6	0.00	21.6	26.20
N263	006	043	1973	17.6	23.1	0.70	21.6	26.20
N263	006	043	1973	14.5	16.5	6.34	21.6	26.20
N263	006	043	1973	12.6	14.0	11.55	21.6	26.20
N263	006	043	1973	10.4	11.4	15.30	21.6	26.20
N263	006	043	1973	8.3	8.9	19.08	21.6	26.20
N263	006	046	1973	43.0	52.8	0.00	49.8	40.38
N263	006	046	1973	42.4	51.3	0.70	49.8	40.38
N263	006	046	1973	41.8	49.8	1.40	49.8	40.38
N263	006	046	1973	40.3	47.2	2.38	49.8	40.38
N263	006	046	1973	37.4	42.2	6.22	49.8	40.38
N263	006	046	1973	35.7	39.6	9.81	49.8	40.38
N263	006	046	1973	33.4	37.1	11.49	49.8	40.38
N263	006	046	1973	31.2	34.5	13.72	49.8	40.38
N263	006	046	1973	29.0	32.0	16.64	49.8	40.38
N263	006	046	1973	27.0	29.5	19.57	49.8	40.38
N263	006	046	1973	22.6	24.4	25.30	49.8	40.38
N263	006	046	1973	17.8	19.3	29.57	49.8	40.38
N263	006	046	1973	13.2	14.2	32.89	49.8	40.38
N263	006	046	1973	10.7	11.7	34.35	49.8	40.38
N263	006	046	1973	8.6	9.1	36.06	49.8	40.38
N435	001	016	1975	6.4	6.8	0.70	5.7	4.56
N435	001	016	1975	5.3	5.7	1.40	5.7	4.56
N435	001	016	1975	4.8	5.2	1.86	5.7	4.56
N435	001	013	1975	8.0	8.6	0.00	5.6	4.39
N435	001	013	1975	6.6	7.1	0.70	5.6	4.39
N435	001	013	1975	5.2	5.6	1.40	5.6	4.39
N435	001	007	1975	10.4	11.0	0.00	9.0	7.97
N435	001	007	1975	9.4	10.0	0.70	9.0	7.97
N435	001	007	1975	8.5	9.0	1.40	9.0	7.97
N435	001	007	1975	7.5	8.0	2.45	9.0	7.97
N435	001	007	1975	6.6	7.0	3.10	9.0	7.97
N435	001	007	1975	5.5	6.0	4.05	9.0	7.97
N435	001	007	1975	10.8	11.7	0.00	10.3	6.80
N435	001	007	1975	10.2	11.0	0.70	10.3	6.80
N435	001	007	1975	9.6	10.3	1.40	10.3	6.80

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	001	007	1975	8.6	9.3	1.70	10.3	6.80
N435	001	007	1975	7.7	8.3	2.35	10.3	6.80
N435	001	007	1975	6.8	7.3	3.00	10.3	6.80
N435	001	009	1975	7.2	8.1	0.00	7.7	7.16
N435	001	009	1975	7.2	7.9	0.70	7.7	7.16
N435	001	009	1975	6.3	6.7	2.58	7.7	7.16
N435	001	009	1975	5.3	5.7	3.62	7.7	7.16
N435	001	009	1975	4.3	4.7	4.34	7.7	7.16
N435	001	003	1975	12.3	13.6	0.00	11.0	7.30
N435	001	003	1975	11.3	12.3	0.70	11.0	7.30
N435	001	003	1975	10.3	11.0	1.40	11.0	7.30
N435	001	003	1975	8.4	9.0	2.12	11.0	7.30
N435	001	003	1975	7.4	8.0	2.99	11.0	7.30
N435	001	003	1975	6.4	7.0	3.65	11.0	7.30
N435	001	003	1975	5.4	6.0	4.68	11.0	7.30
N435	001	006	1975	15.3	17.2	0.00	14.0	7.84
N435	001	006	1975	13.0	14.0	1.40	14.0	7.84
N435	001	006	1975	11.2	12.0	1.84	14.0	7.84
N435	001	006	1975	10.2	11.0	2.05	14.0	7.84
N435	001	006	1975	9.4	10.0	2.70	14.0	7.84
N435	001	006	1975	8.4	9.0	3.37	14.0	7.84
N435	001	006	1975	7.4	8.0	3.76	14.0	7.84
N435	001	006	1975	6.6	7.0	4.73	14.0	7.84
N435	001	006	1975	5.6	6.0	5.30	14.0	7.84
N435	001	007	1975	5.1	5.5	0.70	5.3	4.95
N435	001	007	1975	4.8	5.3	1.40	5.3	4.95
N435	001	007	1975	4.6	4.8	1.70	5.3	4.95
N435	001	018	1975	12.7	14.3	0.00	11.9	8.32
N435	001	018	1975	11.0	11.9	1.40	11.9	8.32
N435	001	018	1975	9.3	9.9	2.82	11.9	8.32
N435	001	018	1975	8.3	8.9	3.04	11.9	8.32
N435	001	018	1975	7.3	7.9	3.98	11.9	8.32
N435	001	018	1975	6.3	6.9	5.00	11.9	8.32
N435	001	018	1975	5.5	5.9	5.40	11.9	8.32
N435	001	018	1975	4.5	4.9	6.18	11.9	8.32
N435	001	006	1975	11.9	12.9	0.00	10.9	7.57
N435	001	006	1975	11.1	11.9	0.70	10.9	7.57
N435	001	006	1975	9.4	9.9	1.90	10.9	7.57
N435	001	006	1975	8.5	8.9	2.78	10.9	7.57
N435	001	006	1975	6.5	6.9	4.00	10.9	7.57
N435	001	006	1975	5.5	5.9	4.93	10.9	7.57
N435	001	006	1975	4.5	4.9	5.59	10.9	7.57
N435	001	021	1975	6.2	6.6	0.00	4.6	3.87
N435	001	021	1975	5.2	5.6	0.70	4.6	3.87
N435	001	014	1975	11.8	12.9	0.00	11.7	8.38
N435	001	014	1975	11.3	12.3	0.70	11.7	8.38
N435	001	014	1975	10.1	10.7	1.89	11.7	8.38
N435	001	014	1975	9.2	9.7	2.80	11.7	8.38
N435	001	014	1975	8.2	8.7	3.58	11.7	8.38
N435	001	014	1975	7.3	7.7	4.28	11.7	8.38
N435	001	014	1975	6.3	6.7	4.54	11.7	8.38
N435	001	002	1979	13.2	14.0	0.70	13.2	12.11

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	001	002	1979	12.7	13.2	1.40	13.2	12.11
N435	001	002	1979	11.8	12.2	2.43	13.2	12.11
N435	001	002	1979	10.0	10.4	4.22	13.2	12.11
N435	001	002	1979	8.6	9.0	5.60	13.2	12.11
N435	001	002	1979	7.8	8.2	6.36	13.2	12.11
N435	001	002	1979	6.9	7.1	7.38	13.2	12.11
N435	001	002	1979	6.1	6.3	8.08	13.2	12.11
N435	001	002	1979	5.1	5.3	9.19	13.2	12.11
N435	001	003	1979	13.6	15.2	0.00	13.2	11.54
N435	001	003	1979	13.0	14.2	0.70	13.2	11.54
N435	001	003	1979	12.4	13.2	1.40	13.2	11.54
N435	001	003	1979	11.7	12.4	1.89	13.2	11.54
N435	001	003	1979	10.7	11.1	2.91	13.2	11.54
N435	001	003	1979	7.8	8.0	5.74	13.2	11.54
N435	001	003	1979	6.9	7.1	6.87	13.2	11.54
N435	001	003	1979	6.2	6.4	7.62	13.2	11.54
N435	001	003	1979	5.1	5.3	8.42	13.2	11.54
N435	001	008	1979	19.1	20.7	1.40	20.7	13.83
N435	001	008	1979	17.4	18.2	2.37	20.7	13.83
N435	001	008	1979	15.0	15.6	4.33	20.7	13.83
N435	001	008	1979	13.0	13.4	5.82	20.7	13.83
N435	001	008	1979	10.3	10.7	7.55	20.7	13.83
N435	001	008	1979	7.9	8.1	9.27	20.7	13.83
N435	001	008	1979	5.5	5.7	11.12	20.7	13.83
N435	001	011	1979	20.8	22.9	0.00	20.9	15.66
N435	001	011	1979	17.4	18.2	2.81	20.9	15.66
N435	001	011	1979	15.4	15.8	4.97	20.9	15.66
N435	001	011	1979	13.0	13.4	7.48	20.9	15.66
N435	001	011	1979	10.6	10.8	8.88	20.9	15.66
N435	001	011	1979	8.3	8.5	10.54	20.9	15.66
N435	001	011	1979	5.6	5.8	12.61	20.9	15.66
N435	002	002	1979	16.2	17.4	0.00	14.6	10.98
N435	002	002	1979	15.2	16.0	0.70	14.6	10.98
N435	002	002	1979	14.2	14.6	1.40	14.6	10.98
N435	002	002	1979	13.0	13.4	2.26	14.6	10.98
N435	002	002	1979	12.1	12.5	2.90	14.6	10.98
N435	002	002	1979	10.0	10.4	4.66	14.6	10.98
N435	002	002	1979	8.5	8.7	5.61	14.6	10.98
N435	002	002	1979	7.6	7.8	5.95	14.6	10.98
N435	002	002	1979	6.5	6.7	6.81	14.6	10.98
N435	002	002	1979	5.2	5.4	8.07	14.6	10.98
N435	002	003	1979	18.2	19.8	0.00	16.4	11.23
N435	002	003	1979	16.9	18.1	0.70	16.4	11.23
N435	002	003	1979	15.7	16.4	1.40	16.4	11.23
N435	002	003	1979	13.5	14.2	3.77	16.4	11.23
N435	002	003	1979	8.7	9.1	7.27	16.4	11.23
N435	002	003	1979	7.0	7.2	8.70	16.4	11.23
N435	002	005	1979	23.3	25.1	0.70	21.6	14.67
N435	002	005	1979	20.1	21.6	1.40	21.6	14.67
N435	002	005	1979	18.4	19.3	2.38	21.6	14.67
N435	002	005	1979	16.3	16.8	3.73	21.6	14.67
N435	002	005	1979	13.3	13.7	5.62	21.6	14.67

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	002	005	1979	10.9	11.3	7.49	21.6	14.67
N435	002	005	1979	8.9	9.1	9.64	21.6	14.67
N435	002	009	1979	21.9	23.9	0.00	20.7	15.45
N435	002	009	1979	19.4	20.7	1.40	20.7	15.45
N435	002	009	1979	15.1	15.8	4.71	20.7	15.45
N435	002	009	1979	13.1	13.5	6.68	20.7	15.45
N435	002	009	1979	10.3	10.7	8.71	20.7	15.45
N435	002	009	1979	8.1	8.3	10.65	20.7	15.45
N435	002	009	1979	5.9	6.1	12.33	20.7	15.45
N435	003	005	1979	12.7	14.7	0.00	12.5	11.64
N435	003	005	1979	12.4	13.6	0.70	12.5	11.64
N435	003	005	1979	12.1	12.5	1.40	12.5	11.64
N435	003	005	1979	11.3	11.7	2.11	12.5	11.64
N435	003	005	1979	8.2	8.4	5.82	12.5	11.64
N435	003	005	1979	7.2	7.4	7.09	12.5	11.64
N435	003	005	1979	6.2	6.4	8.06	12.5	11.64
N435	003	005	1979	5.2	5.4	8.76	12.5	11.64
N435	003	006	1979	22.7	24.6	0.00	22.4	13.97
N435	003	006	1979	21.8	23.5	0.70	22.4	13.97
N435	003	006	1979	20.9	22.4	1.40	22.4	13.97
N435	003	006	1979	19.2	20.1	2.92	22.4	13.97
N435	003	006	1979	17.2	18.0	3.91	22.4	13.97
N435	003	006	1979	14.7	15.1	5.36	22.4	13.97
N435	003	006	1979	12.2	12.6	6.87	22.4	13.97
N435	003	006	1979	9.6	9.8	8.07	22.4	13.97
N435	003	011	1979	13.6	15.1	0.00	13.7	11.38
N435	003	011	1979	12.8	13.7	1.40	13.7	11.38
N435	003	011	1979	12.6	13.0	2.07	13.7	11.38
N435	003	011	1979	11.1	11.5	2.92	13.7	11.38
N435	003	011	1979	10.4	10.7	3.68	13.7	11.38
N435	003	011	1979	8.3	8.5	5.56	13.7	11.38
N435	003	011	1979	7.3	7.5	6.64	13.7	11.38
N435	003	011	1979	6.4	6.6	7.48	13.7	11.38
N435	003	011	1979	5.6	5.8	8.08	13.7	11.38
N435	003	012	1979	24.2	26.9	0.00	22.9	13.59
N435	003	012	1979	20.8	22.9	1.40	22.9	13.59
N435	003	012	1979	18.6	20.2	2.74	22.9	13.59
N435	003	012	1979	16.7	17.9	3.66	22.9	13.59
N435	003	012	1979	14.5	15.3	5.14	22.9	13.59
N435	003	012	1979	12.4	13.0	6.81	22.9	13.59
N435	003	012	1979	9.9	10.3	8.33	22.9	13.59
N435	003	012	1979	7.8	8.0	9.74	22.9	13.59
N435	003	015	1979	21.8	24.6	0.00	21.8	14.57
N435	003	015	1979	19.8	21.8	1.40	21.8	14.57
N435	003	015	1979	17.9	19.5	2.64	21.8	14.57
N435	003	015	1979	13.6	14.2	6.13	21.8	14.57
N435	003	015	1979	11.6	12.0	7.61	21.8	14.57
N435	003	015	1979	8.9	9.1	8.97	21.8	14.57
N435	003	015	1979	6.7	6.9	10.66	21.8	14.57
N435	004	001	1979	17.3	19.0	0.00	17.8	12.55
N435	004	001	1979	17.1	18.4	0.70	17.8	12.55
N435	004	001	1979	14.3	15.1	3.01	17.8	12.55

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	004	001	1979	9.9	10.3	6.54	17.8	12.55
N435	004	001	1979	7.9	8.1	8.12	17.8	12.55
N435	004	001	1979	5.3	5.5	10.05	17.8	12.55
N435	004	009	1979	22.2	24.9	0.00	21.7	14.77
N435	004	009	1979	20.9	23.3	0.70	21.7	14.77
N435	004	009	1979	17.8	19.0	2.39	21.7	14.77
N435	004	009	1979	15.8	16.6	3.98	21.7	14.77
N435	004	009	1979	11.2	11.6	7.47	21.7	14.77
N435	004	009	1979	9.1	9.3	8.95	21.7	14.77
N435	004	009	1979	6.4	6.6	10.87	21.7	14.77
N435	004	016	1979	10.3	11.6	0.00	9.8	10.94
N435	004	016	1979	9.7	10.7	0.70	9.8	10.94
N435	004	016	1979	9.1	9.8	1.40	9.8	10.94
N435	004	016	1979	8.8	9.0	3.44	9.8	10.94
N435	004	016	1979	6.6	6.8	6.65	9.8	10.94
N435	004	016	1979	5.6	5.8	7.54	9.8	10.94
N435	004	018	1979	21.7	24.0	0.70	22.1	14.68
N435	004	018	1979	20.4	22.1	1.40	22.1	14.68
N435	004	018	1979	18.8	19.9	3.02	22.1	14.68
N435	004	018	1979	13.9	14.5	6.18	22.1	14.68
N435	004	018	1979	11.8	12.2	7.89	22.1	14.68
N435	004	018	1979	9.1	9.3	9.73	22.1	14.68
N435	004	018	1979	7.1	7.3	10.76	22.1	14.68
N435	004	022	1979	8.3	11.1	0.00	8.7	10.28
N435	004	022	1979	8.3	9.9	0.70	8.7	10.28
N435	004	022	1979	8.3	8.7	1.40	8.7	10.28
N435	004	022	1979	7.4	7.8	3.19	8.7	10.28
N435	004	022	1979	6.6	6.8	4.52	8.7	10.28
N435	005	004	1979	16.2	19.0	0.00	17.8	13.91
N435	005	004	1979	16.4	18.4	0.70	17.8	13.91
N435	005	004	1979	14.1	14.9	5.56	17.8	13.91
N435	005	004	1979	10.9	11.3	7.06	17.8	13.91
N435	005	004	1979	7.2	7.6	9.63	17.8	13.91
N435	005	004	1979	4.8	5.0	11.25	17.8	13.91
N435	005	005	1979	19.3	22.1	0.00	20.1	14.31
N435	005	005	1979	18.1	20.1	1.40	20.1	14.31
N435	005	005	1979	16.6	17.8	2.16	20.1	14.31
N435	005	005	1979	12.1	12.5	6.80	20.1	14.31
N435	005	005	1979	9.7	10.1	8.51	20.1	14.31
N435	005	005	1979	7.3	7.5	10.59	20.1	14.31
N435	005	005	1979	4.9	5.1	12.36	20.1	14.31
N435	005	008	1979	21.9	25.0	0.00	19.4	15.00
N435	005	008	1979	19.8	22.2	0.70	19.4	15.00
N435	005	008	1979	17.7	19.4	1.40	19.4	15.00
N435	005	008	1979	16.1	16.9	3.85	19.4	15.00
N435	005	008	1979	11.4	11.8	8.49	19.4	15.00
N435	005	008	1979	6.5	6.7	11.53	19.4	15.00
N435	005	015	1979	12.3	13.5	0.00	12.5	12.11
N435	005	015	1979	12.2	13.0	0.70	12.5	12.11
N435	005	015	1979	12.1	12.5	1.40	12.5	12.11
N435	005	015	1979	11.4	11.6	2.54	12.5	12.11
N435	005	015	1979	10.3	10.5	4.02	12.5	12.11

Appendix 22. Sectional measurement data for Horakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	005	015	1979	9.2	9.4	4.80	12.5	12.11
N435	005	015	1979	6.3	6.5	8.08	12.5	12.11
N435	005	015	1979	5.2	5.4	9.47	12.5	12.11
N435	005	017	1979	12.7	14.5	0.00	13.5	11.92
N435	005	017	1979	12.5	14.0	0.70	13.5	11.92
N435	005	017	1979	12.4	13.5	1.40	13.5	11.92
N435	005	017	1979	11.5	12.3	2.31	13.5	11.92
N435	005	017	1979	11.1	11.5	2.89	13.5	11.92
N435	005	017	1979	10.3	10.5	4.25	13.5	11.92
N435	005	017	1979	8.5	8.7	6.62	13.5	11.92
N435	005	017	1979	6.3	6.5	8.32	13.5	11.92
N435	005	017	1979	5.3	5.5	8.97	13.5	11.92
N435	006	002	1979	14.9	16.9	0.70	15.3	12.31
N435	006	002	1979	13.7	15.3	1.40	15.3	12.31
N435	006	002	1979	12.2	13.0	2.79	15.3	12.31
N435	006	002	1979	9.6	10.0	5.84	15.3	12.31
N435	006	002	1979	7.1	7.3	7.65	15.3	12.31
N435	006	002	1979	5.0	5.2	9.89	15.3	12.31
N435	006	005	1979	17.9	19.5	0.00	16.3	12.71
N435	006	005	1979	16.7	17.9	0.70	16.3	12.71
N435	006	005	1979	15.5	16.3	1.40	16.3	12.71
N435	006	005	1979	13.5	13.9	3.34	16.3	12.71
N435	006	005	1979	11.1	11.5	5.65	16.3	12.71
N435	006	005	1979	6.1	6.3	9.55	16.3	12.71
N435	006	014	1979	25.5	28.4	0.00	21.8	14.35
N435	006	014	1979	19.9	21.8	1.40	21.8	14.35
N435	006	014	1979	18.3	19.9	2.03	21.8	14.35
N435	006	014	1979	16.0	16.8	3.65	21.8	14.35
N435	006	014	1979	14.2	15.0	6.23	21.8	14.35
N435	006	014	1979	11.4	11.8	7.34	21.8	14.35
N435	006	014	1979	8.4	8.6	9.53	21.8	14.35
N435	006	014	1979	5.3	5.5	10.66	21.8	14.35
N435	006	020	1979	23.0	25.8	0.70	23.6	14.34
N435	006	020	1979	21.2	23.6	1.40	23.6	14.34
N435	006	020	1979	17.5	18.3	3.82	23.6	14.34
N435	006	020	1979	15.6	16.0	5.32	23.6	14.34
N435	006	020	1979	13.2	13.6	6.70	23.6	14.34
N435	006	020	1979	10.6	11.0	8.30	23.6	14.34
N435	006	020	1979	8.4	8.6	10.03	23.6	14.34
N435	006	020	1979	5.9	6.1	11.87	23.6	14.34
N435	006	022	1979	19.7	21.6	0.70	21.0	12.94
N435	006	022	1979	19.6	21.0	1.40	21.0	12.94
N435	006	022	1979	15.6	16.0	4.13	21.0	12.94
N435	006	022	1979	13.1	13.5	5.56	21.0	12.94
N435	006	022	1979	10.9	11.3	7.32	21.0	12.94
N435	006	022	1979	8.4	8.6	8.61	21.0	12.94
N435	006	022	1979	5.9	6.1	10.23	21.0	12.94
N435	007	006	1979	21.7	23.9	1.40	23.9	13.45
N435	007	006	1979	19.4	21.4	2.26	23.9	13.45
N435	007	006	1979	17.8	19.0	3.65	23.9	13.45
N435	007	006	1979	15.4	16.2	4.94	23.9	13.45
N435	007	006	1979	13.5	13.9	6.08	23.9	13.45

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	007	006	1979	10.9	11.3	7.68	23.9	13.45
N435	007	006	1979	8.7	8.9	8.95	23.9	13.45
N435	007	006	1979	6.3	6.5	10.89	23.9	13.45
N435	007	014	1979	21.9	23.9	0.70	22.7	13.54
N435	007	014	1979	18.1	19.3	2.62	22.7	13.54
N435	007	014	1979	17.0	18.2	3.81	22.7	13.54
N435	007	014	1979	14.4	15.2	4.96	22.7	13.54
N435	007	014	1979	12.2	13.0	6.30	22.7	13.54
N435	007	014	1979	9.5	9.9	7.85	22.7	13.54
N435	007	014	1979	7.4	7.8	8.85	22.7	13.54
N435	007	014	1979	5.0	5.2	11.47	22.7	13.54
N435	007	016	1979	15.0	15.8	0.00	13.0	10.50
N435	007	016	1979	13.6	14.4	0.70	13.0	10.50
N435	007	016	1979	11.7	12.1	2.13	13.0	10.50
N435	007	016	1979	10.7	11.1	3.25	13.0	10.50
N435	007	016	1979	9.6	10.0	4.29	13.0	10.50
N435	007	016	1979	7.8	8.0	6.31	13.0	10.50
N435	007	016	1979	6.7	6.9	7.08	13.0	10.50
N435	007	016	1979	5.8	6.0	7.51	13.0	10.50
N435	007	016	1979	5.2	5.4	8.13	13.0	10.50
N435	007	018	1979	13.4	16.0	0.00	13.8	11.01
N435	007	018	1979	13.1	14.9	0.70	13.8	11.01
N435	007	018	1979	11.7	12.5	2.22	13.8	11.01
N435	007	018	1979	11.1	11.9	3.12	13.8	11.01
N435	007	018	1979	10.3	10.7	3.98	13.8	11.01
N435	007	018	1979	9.4	9.8	4.63	13.8	11.01
N435	007	018	1979	8.5	8.9	5.17	13.8	11.01
N435	007	018	1979	6.5	6.7	7.07	13.8	11.01
N435	007	018	1979	5.7	5.9	8.08	13.8	11.01
N435	007	020	1979	20.8	22.4	0.00	19.8	13.03
N435	007	020	1979	19.6	21.1	0.70	19.8	13.03
N435	007	020	1979	16.5	17.3	2.53	19.8	13.03
N435	007	020	1979	11.6	12.0	6.23	19.8	13.03
N435	007	020	1979	9.2	9.6	7.91	19.8	13.03
N435	007	020	1979	7.1	7.3	9.22	19.8	13.03
N435	007	020	1979	4.7	4.9	10.69	19.8	13.03
N435	008	001	1979	15.5	17.9	0.00	15.5	12.58
N435	008	001	1979	14.7	16.7	0.70	15.5	12.58
N435	008	001	1979	13.9	15.5	1.40	15.5	12.58
N435	008	001	1979	12.3	12.9	3.32	15.5	12.58
N435	008	001	1979	10.1	10.5	5.65	15.5	12.58
N435	008	001	1979	5.2	5.4	9.53	15.5	12.58
N435	008	002	1979	10.4	12.0	0.00	11.0	10.58
N435	008	002	1979	10.2	11.0	1.40	11.0	10.58
N435	008	002	1979	9.7	10.1	2.84	11.0	10.58
N435	008	002	1979	7.6	8.0	5.02	11.0	10.58
N435	008	002	1979	6.8	7.0	6.09	11.0	10.58
N435	008	002	1979	5.8	6.0	7.21	11.0	10.58
N435	008	002	1979	4.9	5.1	7.74	11.0	10.58
N435	008	008	1979	18.2	20.6	0.00	16.4	10.90
N435	008	008	1979	16.5	18.5	0.70	16.4	10.90
N435	008	008	1979	13.3	14.1	2.83	16.4	10.90

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	008	008	1979	10.6	11.4	4.50	16.4	10.90
N435	008	008	1979	8.3	8.7	6.10	16.4	10.90
N435	008	008	1979	5.9	6.3	8.05	16.4	10.90
N435	008	010	1979	9.7	10.5	0.00	9.5	9.54
N435	008	010	1979	9.2	10.0	0.70	9.5	9.54
N435	008	010	1979	8.7	9.5	1.40	9.5	9.54
N435	008	010	1979	8.1	8.5	2.77	9.5	9.54
N435	008	010	1979	7.2	7.4	4.13	9.5	9.54
N435	008	010	1979	5.3	5.5	6.16	9.5	9.54
N435	008	016	1979	15.4	17.0	0.70	15.9	12.43
N435	008	016	1979	14.7	15.9	1.40	15.9	12.43
N435	008	016	1979	13.0	13.4	3.35	15.9	12.43
N435	008	016	1979	9.9	10.3	5.27	15.9	12.43
N435	008	016	1979	8.2	8.6	7.23	15.9	12.43
N435	008	016	1979	5.8	6.0	9.19	15.9	12.43
N435	009	001	1979	24.0	26.7	0.00	22.1	14.36
N435	009	001	1979	22.4	24.4	0.70	22.1	14.36
N435	009	001	1979	18.7	19.5	2.49	22.1	14.36
N435	009	001	1979	16.1	16.9	3.82	22.1	14.36
N435	009	001	1979	14.2	14.6	5.35	22.1	14.36
N435	009	001	1979	11.8	12.2	6.92	22.1	14.36
N435	009	001	1979	6.8	7.0	10.73	22.1	14.36
N435	009	001	1979	4.7	4.9	12.23	22.1	14.36
N435	009	002	1979	17.1	20.0	0.00	16.2	13.82
N435	009	002	1979	15.7	18.1	0.70	16.2	13.82
N435	009	002	1979	14.3	16.2	1.40	16.2	13.82
N435	009	002	1979	11.1	11.5	5.47	16.2	13.82
N435	009	002	1979	8.5	8.9	8.51	16.2	13.82
N435	009	002	1979	5.9	6.1	10.68	16.2	13.82
N435	009	010	1979	18.4	20.8	0.00	16.6	13.13
N435	009	010	1979	16.7	18.7	0.70	16.6	13.13
N435	009	010	1979	13.4	14.2	3.21	16.6	13.13
N435	009	010	1979	11.0	11.4	5.85	16.6	13.13
N435	009	010	1979	8.5	8.9	7.82	16.6	13.13
N435	009	010	1979	6.2	6.4	9.83	16.6	13.13
N435	009	018	1979	20.7	23.1	0.70	21.2	14.80
N435	009	018	1979	19.6	21.2	1.40	21.2	14.80
N435	009	018	1979	17.5	18.6	2.91	21.2	14.80
N435	009	018	1979	12.9	13.3	6.81	21.2	14.80
N435	009	018	1979	10.5	10.9	8.58	21.2	14.80
N435	009	018	1979	8.5	8.7	10.05	21.2	14.80
N435	009	018	1979	5.8	6.0	11.94	21.2	14.80
N435	010	001	1979	11.6	13.2	0.00	12.6	12.37
N435	010	001	1979	11.7	12.9	0.70	12.6	12.37
N435	010	001	1979	11.8	12.6	1.40	12.6	12.37
N435	010	001	1979	11.0	11.4	2.51	12.6	12.37
N435	010	001	1979	10.2	10.6	3.79	12.6	12.37
N435	010	001	1979	8.3	8.5	5.95	12.6	12.37
N435	010	001	1979	7.4	7.6	7.22	12.6	12.37
N435	010	001	1979	6.5	6.7	8.32	12.6	12.37
N435	010	002	1979	19.1	21.1	0.70	19.1	12.10
N435	010	002	1979	17.9	19.1	1.40	19.1	12.10

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	010	002	1979	16.0	16.8	2.22	19.1	12.10
N435	010	002	1979	11.1	11.5	5.43	19.1	12.10
N435	010	002	1979	8.7	9.1	7.04	19.1	12.10
N435	010	002	1979	6.5	6.7	8.85	19.1	12.10
N435	010	004	1979	12.9	14.1	0.00	12.1	10.46
N435	010	004	1979	12.3	13.1	0.70	12.1	10.46
N435	010	004	1979	11.7	12.1	1.40	12.1	10.46
N435	010	004	1979	10.0	10.2	3.11	12.1	10.46
N435	010	004	1979	7.6	7.8	5.73	12.1	10.46
N435	010	004	1979	6.9	7.1	6.45	12.1	10.46
N435	010	004	1979	5.8	6.0	7.42	12.1	10.46
N435	010	004	1979	4.9	5.1	8.15	12.1	10.46
N435	010	005	1979	19.0	20.9	0.70	19.0	13.46
N435	010	005	1979	17.4	19.0	1.40	19.0	13.46
N435	010	005	1979	15.6	16.8	2.55	19.0	13.46
N435	010	005	1979	13.4	14.2	3.83	19.0	13.46
N435	010	005	1979	11.3	11.7	5.51	19.0	13.46
N435	010	005	1979	8.7	9.1	6.90	19.0	13.46
N435	010	006	1979	19.6	21.2	0.00	19.0	14.54
N435	010	006	1979	18.6	20.1	0.70	19.0	14.54
N435	010	006	1979	15.6	16.5	3.09	19.0	14.54
N435	010	006	1979	13.3	14.1	4.85	19.0	14.54
N435	010	006	1979	8.7	9.1	8.81	19.0	14.54
N435	010	006	1979	6.2	6.4	11.46	19.0	14.54
N435	011	001	1979	11.0	12.2	1.40	12.2	10.45
N435	011	001	1979	10.5	11.1	2.29	12.2	10.45
N435	011	001	1979	9.6	10.0	2.95	12.2	10.45
N435	011	001	1979	8.8	9.0	4.27	12.2	10.45
N435	011	001	1979	7.8	8.0	5.30	12.2	10.45
N435	011	001	1979	7.0	7.2	6.15	12.2	10.45
N435	011	001	1979	6.0	6.2	6.99	12.2	10.45
N435	011	001	1979	5.0	5.2	7.83	12.2	10.45
N435	011	010	1979	14.6	15.8	0.00	14.4	10.27
N435	011	010	1979	14.3	15.1	0.70	14.4	10.27
N435	011	010	1979	14.0	14.4	1.40	14.4	10.27
N435	011	010	1979	13.0	13.4	1.79	14.4	10.27
N435	011	010	1979	12.1	12.3	2.44	14.4	10.27
N435	011	010	1979	10.3	10.5	3.99	14.4	10.27
N435	011	010	1979	9.1	9.3	4.40	14.4	10.27
N435	011	010	1979	7.3	7.5	5.95	14.4	10.27
N435	011	010	1979	6.3	6.5	6.67	14.4	10.27
N435	011	010	1979	5.2	5.4	7.72	14.4	10.27
N435	011	014	1979	16.0	18.0	0.00	14.2	11.07
N435	011	014	1979	14.5	16.1	0.70	14.2	11.07
N435	011	014	1979	13.0	14.2	1.40	14.2	11.07
N435	011	014	1979	11.7	12.1	2.91	14.2	11.07
N435	011	014	1979	10.6	11.0	3.86	14.2	11.07
N435	011	014	1979	10.0	10.2	4.51	14.2	11.07
N435	011	014	1979	8.9	9.1	5.34	14.2	11.07
N435	011	014	1979	7.8	8.0	5.86	14.2	11.07
N435	011	014	1979	7.1	7.3	6.46	14.2	11.07
N435	011	014	1979	5.0	5.2	8.14	14.2	11.07

Appendix 22. Sectionol measurement doto for Horokeke.
(cont.) (80% sub-somple)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	011	016	1979	10.0	11.2	0.00	9.4	7.97
N435	011	016	1979	9.5	10.3	0.70	9.4	7.97
N435	011	016	1979	9.0	9.4	1.40	9.4	7.97
N435	011	016	1979	7.2	7.4	2.79	9.4	7.97
N435	011	016	1979	6.2	6.4	3.79	9.4	7.97
N435	011	016	1979	5.2	5.4	4.56	9.4	7.97
N435	011	017	1979	8.6	9.2	0.00	8.2	8.70
N435	011	017	1979	8.3	8.7	0.70	8.2	8.70
N435	011	017	1979	8.0	8.2	1.40	8.2	8.70
N435	011	017	1979	6.8	7.0	2.61	8.2	8.70
N435	011	017	1979	6.0	6.2	3.61	8.2	8.70
N435	012	007	1979	18.2	20.2	0.70	18.4	10.72
N435	012	007	1979	15.0	15.8	2.45	18.4	10.72
N435	012	007	1979	12.9	13.3	3.74	18.4	10.72
N435	012	007	1979	10.3	10.5	5.49	18.4	10.72
N435	012	007	1979	8.1	8.3	6.49	18.4	10.72
N435	012	007	1979	5.7	5.9	7.97	18.4	10.72
N435	012	011	1979	19.4	22.2	0.00	18.8	12.03
N435	012	011	1979	18.1	20.5	0.70	18.8	12.03
N435	012	011	1979	12.9	13.7	4.79	18.8	12.03
N435	012	011	1979	10.9	11.3	6.39	18.8	12.03
N435	012	011	1979	8.2	8.6	7.52	18.8	12.03
N435	012	011	1979	6.1	6.3	9.54	18.8	12.03
N435	012	018	1979	13.6	15.6	0.00	12.4	9.76
N435	012	018	1979	12.0	12.4	1.40	12.4	9.76
N435	012	018	1979	11.0	11.4	2.00	12.4	9.76
N435	012	018	1979	10.3	10.5	2.78	12.4	9.76
N435	012	018	1979	9.1	9.3	3.80	12.4	9.76
N435	012	018	1979	8.3	8.5	4.47	12.4	9.76
N435	012	018	1979	6.2	6.4	6.32	12.4	9.76
N435	012	018	1979	5.2	5.4	7.23	12.4	9.76
N435	012	019	1979	13.3	15.7	0.00	11.7	9.72
N435	012	019	1979	11.7	13.7	0.70	11.7	9.72
N435	012	019	1979	10.1	11.7	1.40	11.7	9.72
N435	012	019	1979	9.8	11.0	2.31	11.7	9.72
N435	012	019	1979	8.6	9.4	3.21	11.7	9.72
N435	012	019	1979	8.0	8.4	3.94	11.7	9.72
N435	012	019	1979	7.3	7.5	4.71	11.7	9.72
N435	012	022	1979	18.4	20.8	0.00	18.8	11.45
N435	012	022	1979	15.7	16.5	2.88	18.8	11.45
N435	012	022	1979	12.7	13.5	4.37	18.8	11.45
N435	012	022	1979	11.2	11.6	5.43	18.8	11.45
N435	012	022	1979	8.6	9.0	6.51	18.8	11.45
N435	012	022	1979	6.1	6.3	8.74	18.8	11.45
N305	001	001	1977	15.1	19.3	0.70	17.4	10.40
N305	001	001	1977	14.3	17.4	1.40	17.4	10.40
N305	001	001	1977	11.2	12.6	3.00	17.4	10.40
N305	001	001	1977	9.7	10.5	4.00	17.4	10.40
N305	001	001	1977	7.1	7.5	6.00	17.4	10.40
N305	001	001	1977	4.6	5.0	7.50	17.4	10.40
N305	001	003	1977	13.6	15.7	0.00	12.3	9.90
N305	001	003	1977	12.4	14.0	0.70	12.3	9.90

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	001	003	1977	11.2	12.3	1.40	12.3	9.90
N305	001	003	1977	10.1	11.2	1.95	12.3	9.90
N305	001	003	1977	9.7	10.5	2.45	12.3	9.90
N305	001	003	1977	8.3	9.0	3.50	12.3	9.90
N305	001	003	1977	6.3	6.9	5.20	12.3	9.90
N305	001	005	1977	11.7	13.4	0.00	10.6	8.05
N305	001	005	1977	9.7	10.6	1.40	10.6	8.05
N305	001	005	1977	9.2	10.0	1.70	10.6	8.05
N305	001	005	1977	7.6	8.4	2.50	10.6	8.05
N305	001	005	1977	5.7	6.3	4.45	10.6	8.05
N305	001	005	1977	5.1	5.5	5.05	10.6	8.05
N305	001	007	1977	15.3	17.3	0.00	14.5	12.60
N305	001	007	1977	14.3	15.9	0.70	14.5	12.60
N305	001	007	1977	13.3	14.5	1.40	14.5	12.60
N305	001	007	1977	12.1	13.0	2.30	14.5	12.60
N305	001	007	1977	11.5	12.3	2.85	14.5	12.60
N305	001	007	1977	9.6	10.3	5.50	14.5	12.60
N305	001	007	1977	8.6	9.2	6.00	14.5	12.60
N305	001	007	1977	7.7	8.1	7.05	14.5	12.60
N305	001	007	1977	7.1	7.5	7.90	14.5	12.60
N305	001	007	1977	5.9	6.3	8.80	14.5	12.60
N305	001	009	1977	13.7	15.1	0.00	12.3	11.57
N305	001	009	1977	12.6	13.7	0.70	12.3	11.57
N305	001	009	1977	11.4	12.3	1.40	12.3	11.57
N305	001	009	1977	10.8	11.4	2.30	12.3	11.57
N305	001	009	1977	9.5	10.0	3.85	12.3	11.57
N305	001	009	1977	8.6	9.2	5.15	12.3	11.57
N305	001	009	1977	7.7	8.3	6.15	12.3	11.57
N305	001	009	1977	6.7	7.2	7.40	12.3	11.57
N305	002	001	1977	14.3	15.8	0.70	14.5	9.35
N305	002	001	1977	13.5	14.5	1.40	14.5	9.35
N305	002	001	1977	12.5	13.3	2.05	14.5	9.35
N305	002	001	1977	11.1	11.7	2.95	14.5	9.35
N305	002	001	1977	10.3	11.0	3.70	14.5	9.35
N305	002	001	1977	9.4	10.0	4.05	14.5	9.35
N305	002	001	1977	8.7	9.3	4.75	14.5	9.35
N305	002	001	1977	7.4	8.0	5.60	14.5	9.35
N305	002	001	1977	6.6	7.1	6.32	14.5	9.35
N305	002	001	1977	5.9	6.3	6.70	14.5	9.35
N305	002	003	1977	11.7	13.5	0.00	10.5	6.60
N305	002	003	1977	10.7	12.0	0.70	10.5	6.60
N305	002	003	1977	9.7	10.5	1.40	10.5	6.60
N305	002	003	1977	7.0	7.5	3.21	10.5	6.60
N305	002	003	1977	6.1	6.5	3.90	10.5	6.60
N305	002	003	1977	5.3	5.7	4.36	10.5	6.60
N305	002	006	1977	18.7	21.5	0.00	20.5	12.18
N305	002	006	1977	18.6	21.0	0.70	20.5	12.18
N305	002	006	1977	15.0	16.3	3.23	20.5	12.18
N305	002	006	1977	12.2	13.0	5.35	20.5	12.18
N305	002	006	1977	9.9	10.6	7.10	20.5	12.18
N305	002	006	1977	7.5	8.2	8.75	20.5	12.18
N305	002	006	1977	5.1	5.5	9.85	20.5	12.18

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	002	007	1977	18.8	21.8	0.00	18.0	12.50
N305	002	007	1977	17.4	19.9	0.70	18.0	12.50
N305	002	007	1977	16.1	18.0	1.40	18.0	12.50
N305	002	007	1977	14.3	15.3	2.56	18.0	12.50
N305	002	007	1977	10.4	11.0	5.60	18.0	12.50
N305	002	007	1977	5.1	5.5	8.90	18.0	12.50
N305	002	009	1977	15.6	17.0	0.70	15.3	11.45
N305	002	009	1977	14.3	15.3	1.40	15.3	11.45
N305	002	009	1977	12.9	13.5	2.50	15.3	11.45
N305	002	009	1977	10.1	10.8	4.55	15.3	11.45
N305	002	009	1977	7.3	7.9	6.65	15.3	11.45
N305	002	009	1977	4.9	5.3	8.70	15.3	11.45
N305	003	001	1977	19.2	22.4	0.70	20.0	11.60
N305	003	001	1977	14.6	16.0	2.65	20.0	11.60
N305	003	001	1977	12.5	13.5	3.60	20.0	11.60
N305	003	001	1977	11.2	12.1	4.30	20.0	11.60
N305	003	001	1977	9.2	10.0	5.80	20.0	11.60
N305	003	001	1977	7.1	7.6	7.16	20.0	11.60
N305	003	001	1977	4.7	5.1	8.70	20.0	11.60
N305	003	003	1977	18.1	20.0	0.00	18.0	11.60
N305	003	003	1977	17.3	19.0	0.70	18.0	11.60
N305	003	003	1977	13.9	15.0	2.15	18.0	11.60
N305	003	003	1977	12.1	12.9	3.40	18.0	11.60
N305	003	003	1977	9.6	10.4	5.54	18.0	11.60
N305	003	003	1977	7.4	8.0	7.00	18.0	11.60
N305	003	005	1977	15.7	17.9	0.00	15.1	11.48
N305	003	005	1977	14.8	16.5	0.70	15.1	11.48
N305	003	005	1977	12.4	13.3	2.10	15.1	11.48
N305	003	005	1977	10.7	11.3	3.55	15.1	11.48
N305	003	005	1977	7.2	7.6	6.30	15.1	11.48
N305	003	005	1977	4.9	5.3	8.25	15.1	11.48
N305	003	007	1977	25.8	30.2	0.00	25.8	14.05
N305	003	007	1977	24.4	28.0	0.70	25.8	14.05
N305	003	007	1977	22.8	25.8	1.40	25.8	14.05
N305	003	007	1977	19.2	21.5	3.20	25.8	14.05
N305	003	007	1977	10.4	11.0	7.50	25.8	14.05
N305	003	007	1977	5.2	5.7	10.90	25.8	14.05
N305	003	009	1977	14.2	15.6	0.00	13.0	9.82
N305	003	009	1977	12.3	13.0	1.40	13.0	9.82
N305	003	009	1977	11.8	12.4	1.80	13.0	9.82
N305	003	009	1977	10.2	10.8	2.75	13.0	9.82
N305	003	009	1977	9.7	10.3	3.35	13.0	9.82
N305	003	009	1977	7.4	7.8	5.20	13.0	9.82
N305	003	009	1977	6.6	7.0	5.90	13.0	9.82
N305	003	009	1977	5.3	5.7	6.65	13.0	9.82
N305	003	009	1977	4.8	5.2	7.10	13.0	9.82
N305	004	001	1977	18.9	21.8	0.00	17.6	12.25
N305	004	001	1977	17.3	19.7	0.70	17.6	12.25
N305	004	001	1977	15.8	17.6	1.40	17.6	12.25
N305	004	001	1977	9.2	9.8	5.85	17.6	12.25
N305	004	001	1977	7.1	7.7	7.80	17.6	12.25
N305	004	001	1977	4.9	5.3	9.30	17.6	12.25

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	004	003	1977	15.8	17.1	0.70	15.5	11.80
N305	004	003	1977	14.3	15.5	1.40	15.5	11.80
N305	004	003	1977	12.3	12.9	2.95	15.5	11.80
N305	004	003	1977	9.9	10.5	4.75	15.5	11.80
N305	004	003	1977	7.6	8.1	6.80	15.5	11.80
N305	004	003	1977	4.8	5.3	9.00	15.5	11.80
N305	004	005	1977	16.3	19.9	0.00	17.9	12.08
N305	004	005	1977	16.0	18.9	0.70	17.9	12.08
N305	004	005	1977	15.8	17.9	1.40	17.9	12.08
N305	004	005	1977	12.4	13.4	3.00	17.9	12.08
N305	004	005	1977	9.3	10.1	5.80	17.9	12.08
N305	004	005	1977	7.6	8.2	7.30	17.9	12.08
N305	004	007	1977	15.1	18.0	0.00	17.0	11.70
N305	004	007	1977	15.4	17.5	0.70	17.0	11.70
N305	004	007	1977	15.7	17.0	1.40	17.0	11.70
N305	004	007	1977	13.5	14.4	2.83	17.0	11.70
N305	004	007	1977	8.9	9.5	6.50	17.0	11.70
N305	004	007	1977	6.6	7.0	7.80	17.0	11.70
N305	004	009	1977	17.4	19.8	0.00	17.0	14.30
N305	004	009	1977	16.4	18.4	0.70	17.0	14.30
N305	004	009	1977	13.4	14.2	2.90	17.0	14.30
N305	004	009	1977	11.6	12.2	4.40	17.0	14.30
N305	004	009	1977	9.3	9.7	6.90	17.0	14.30
N305	004	009	1977	6.9	7.3	9.20	17.0	14.30
N305	005	002	1977	20.7	23.1	0.00	18.1	11.80
N305	005	002	1977	18.7	20.6	0.70	18.1	11.80
N305	005	002	1977	16.7	18.1	1.40	18.1	11.80
N305	005	002	1977	11.8	12.6	4.35	18.1	11.80
N305	005	002	1977	10.2	10.8	5.60	18.1	11.80
N305	005	002	1977	5.0	5.4	9.35	18.1	11.80
N305	005	003	1977	19.2	22.6	0.00	20.0	12.75
N305	005	003	1977	18.5	21.3	0.70	20.0	12.75
N305	005	003	1977	16.0	17.5	2.00	20.0	12.75
N305	005	003	1977	13.6	14.5	4.35	20.0	12.75
N305	005	003	1977	11.5	12.3	5.70	20.0	12.75
N305	005	003	1977	9.4	10.0	6.85	20.0	12.75
N305	005	003	1977	6.7	7.3	8.50	20.0	12.75
N305	005	005	1977	17.8	20.5	0.00	18.5	12.30
N305	005	005	1977	17.2	19.5	0.70	18.5	12.30
N305	005	005	1977	15.2	16.3	2.65	18.5	12.30
N305	005	005	1977	12.6	13.3	4.75	18.5	12.30
N305	005	005	1977	7.9	8.5	7.90	18.5	12.30
N305	005	005	1977	5.9	6.3	9.20	18.5	12.30
N305	005	007	1977	11.8	12.6	0.00	11.0	10.50
N305	005	007	1977	11.1	11.8	0.70	11.0	10.50
N305	005	007	1977	10.5	11.0	1.40	11.0	10.50
N305	005	007	1977	8.2	8.7	4.05	11.0	10.50
N305	005	007	1977	6.5	6.9	6.60	11.0	10.50
N305	005	007	1977	5.8	6.2	7.40	11.0	10.50
N305	005	007	1977	4.7	5.1	7.85	11.0	10.50
N305	005	009	1977	12.3	13.4	0.70	12.0	10.80
N305	005	009	1977	11.2	12.0	1.40	12.0	10.80

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	005	009	1977	10.4	11.0	2.85	12.0	10.80
N305	005	009	1977	9.0	9.5	3.55	12.0	10.80
N305	005	009	1977	8.1	8.5	4.30	12.0	10.80
N305	005	009	1977	6.7	7.1	6.40	12.0	10.80
N305	005	009	1977	5.6	6.0	7.30	12.0	10.80
N305	005	009	1977	4.7	5.1	8.00	12.0	10.80
N305	006	001	1977	19.3	22.0	0.00	18.0	12.35
N305	006	001	1977	17.7	20.0	0.70	18.0	12.35
N305	006	001	1977	16.1	18.0	1.40	18.0	12.35
N305	006	001	1977	10.1	10.7	6.45	18.0	12.35
N305	006	001	1977	7.6	8.1	7.35	18.0	12.35
N305	006	001	1977	5.4	5.8	9.00	18.0	12.35
N305	006	003	1977	18.4	20.4	0.00	15.6	11.55
N305	006	003	1977	16.3	18.0	0.70	15.6	11.55
N305	006	003	1977	12.1	12.8	3.10	15.6	11.55
N305	006	003	1977	9.7	10.3	5.55	15.6	11.55
N305	006	003	1977	7.2	7.8	7.25	15.6	11.55
N305	006	003	1977	5.3	5.7	8.70	15.6	11.55
N305	006	005	1977	18.1	19.8	0.00	16.4	12.30
N305	006	005	1977	16.7	18.1	0.70	16.4	12.30
N305	006	005	1977	13.1	13.9	2.75	16.4	12.30
N305	006	005	1977	10.5	11.3	4.90	16.4	12.30
N305	006	005	1977	7.9	8.5	7.15	16.4	12.30
N305	006	005	1977	5.6	6.0	8.70	16.4	12.30
N305	006	007	1977	14.6	16.9	0.00	14.5	11.10
N305	006	007	1977	13.1	14.5	1.40	14.5	11.10
N305	006	007	1977	12.1	13.0	2.30	14.5	11.10
N305	006	007	1977	9.5	10.1	4.10	14.5	11.10
N305	006	007	1977	8.4	9.1	4.60	14.5	11.10
N305	006	007	1977	7.8	8.2	5.50	14.5	11.10
N305	006	007	1977	6.9	7.3	6.60	14.5	11.10
N305	006	007	1977	6.1	6.5	7.05	14.5	11.10
N305	006	007	1977	5.4	5.8	7.45	14.5	11.10
N305	006	009	1977	22.4	24.8	0.00	21.0	13.35
N305	006	009	1977	20.8	22.9	0.70	21.0	13.35
N305	006	009	1977	14.8	15.5	4.75	21.0	13.35
N305	006	009	1977	12.7	13.5	5.95	21.0	13.35
N305	006	009	1977	10.0	10.8	7.65	21.0	13.35
N305	006	009	1977	7.6	8.4	9.25	21.0	13.35
N305	006	009	1977	5.9	6.5	10.10	21.0	13.35
N305	007	001	1977	20.9	22.7	0.00	18.9	14.10
N305	007	001	1977	17.5	18.9	1.40	18.9	14.10
N305	007	001	1977	14.8	15.8	2.75	18.9	14.10
N305	007	001	1977	12.9	13.7	4.55	18.9	14.10
N305	007	001	1977	10.3	10.9	6.80	18.9	14.10
N305	007	001	1977	8.1	8.6	8.70	18.9	14.10
N305	007	003	1977	16.9	19.4	0.00	17.0	12.05
N305	007	003	1977	16.2	18.2	0.70	17.0	12.05
N305	007	003	1977	15.5	17.0	1.40	17.0	12.05
N305	007	003	1977	13.7	14.5	2.77	17.0	12.05
N305	007	003	1977	11.1	11.9	4.80	17.0	12.05
N305	007	003	1977	6.3	6.8	8.10	17.0	12.05

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	007	005	1977	17.5	19.5	0.70	17.0	11.95
N305	007	005	1977	15.5	17.0	1.40	17.0	11.95
N305	007	005	1977	13.2	14.1	2.85	17.0	11.95
N305	007	005	1977	11.1	11.7	5.00	17.0	11.95
N305	007	005	1977	8.6	9.2	6.65	17.0	11.95
N305	007	005	1977	6.8	7.3	8.15	17.0	11.95
N305	007	008	1977	21.7	24.3	0.00	20.5	14.30
N305	007	008	1977	18.7	20.5	1.40	20.5	14.30
N305	007	008	1977	17.1	18.0	3.60	20.5	14.30
N305	007	008	1977	14.3	15.1	4.80	20.5	14.30
N305	007	008	1977	12.4	13.0	6.30	20.5	14.30
N305	007	008	1977	9.6	10.2	8.00	20.5	14.30
N305	007	008	1977	5.1	5.5	11.60	20.5	14.30
N305	007	009	1977	18.7	20.7	0.70	19.5	12.55
N305	007	009	1977	17.8	19.5	1.40	19.5	12.55
N305	007	009	1977	15.4	16.4	3.08	19.5	12.55
N305	007	009	1977	13.2	14.1	4.25	19.5	12.55
N305	007	009	1977	8.6	9.3	7.50	19.5	12.55
N305	007	009	1977	5.9	6.3	9.10	19.5	12.55
N305	008	001	1977	24.1	26.6	0.00	21.4	11.20
N305	008	001	1977	22.0	24.0	0.70	21.4	11.20
N305	008	001	1977	16.9	18.1	2.55	21.4	11.20
N305	008	001	1977	14.1	15.1	3.50	21.4	11.20
N305	008	001	1977	10.7	11.4	4.95	21.4	11.20
N305	008	001	1977	8.4	9.0	6.95	21.4	11.20
N305	008	001	1977	5.8	6.4	8.45	21.4	11.20
N305	008	003	1977	18.3	21.3	0.00	16.1	10.15
N305	008	003	1977	16.4	18.7	0.70	16.1	10.15
N305	008	003	1977	13.2	14.0	2.45	16.1	10.15
N305	008	003	1977	10.2	10.9	4.20	16.1	10.15
N305	008	003	1977	7.9	8.5	6.10	16.1	10.15
N305	008	003	1977	5.4	6.0	7.90	16.1	10.15
N305	008	005	1977	17.8	20.5	0.00	18.9	12.70
N305	008	005	1977	17.3	19.7	0.70	18.9	12.70
N305	008	005	1977	14.3	15.9	2.40	18.9	12.70
N305	008	005	1977	12.5	13.6	4.10	18.9	12.70
N305	008	005	1977	8.2	8.8	7.50	18.9	12.70
N305	008	005	1977	5.3	5.7	9.60	18.9	12.70
N305	008	008	1977	17.6	19.7	0.00	16.7	11.85
N305	008	008	1977	15.3	16.7	1.40	16.7	11.85
N305	008	008	1977	13.2	14.0	3.40	16.7	11.85
N305	008	008	1977	11.3	12.0	4.80	16.7	11.85
N305	008	008	1977	8.4	8.9	6.80	16.7	11.85
N305	008	008	1977	6.6	7.1	8.30	16.7	11.85
N305	008	009	1977	19.7	22.6	0.00	19.0	12.25
N305	008	009	1977	18.4	20.8	0.70	19.0	12.25
N305	008	009	1977	14.9	16.0	3.10	19.0	12.25
N305	008	009	1977	13.5	14.3	4.90	19.0	12.25
N305	008	009	1977	7.8	8.4	9.60	19.0	12.25
N305	008	009	1977	6.5	7.1	10.70	19.0	12.25
N305	009	001	1977	20.5	23.2	0.00	19.0	13.10
N305	009	001	1977	19.1	21.1	0.70	19.0	13.10

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	009	001	1977	17.7	19.0	1.40	19.0	13.10
N305	009	001	1977	10.1	10.7	6.30	19.0	13.10
N305	009	001	1977	8.5	9.1	7.85	19.0	13.10
N305	009	001	1977	5.6	6.2	9.80	19.0	13.10
N305	009	003	1977	17.3	19.2	0.70	17.4	12.15
N305	009	003	1977	16.0	17.4	1.40	17.4	12.15
N305	009	003	1977	14.7	15.5	2.25	17.4	12.15
N305	009	003	1977	11.5	12.3	5.10	17.4	12.15
N305	009	003	1977	9.3	10.0	7.00	17.4	12.15
N305	009	003	1977	6.1	6.5	8.95	17.4	12.15
N305	009	005	1977	18.3	20.5	0.70	19.1	12.20
N305	009	005	1977	17.6	19.1	1.40	19.1	12.20
N305	009	005	1977	14.9	15.8	2.70	19.1	12.20
N305	009	005	1977	10.5	11.4	6.20	19.1	12.20
N305	009	005	1977	8.3	9.1	7.25	19.1	12.20
N305	009	005	1977	6.0	6.6	8.51	19.1	12.20
N305	009	007	1977	24.5	28.0	0.00	25.0	16.35
N305	009	007	1977	23.9	26.5	0.70	25.0	16.35
N305	009	007	1977	23.2	25.0	1.40	25.0	16.35
N305	009	007	1977	18.0	19.0	4.45	25.0	16.35
N305	009	007	1977	14.5	15.3	7.10	25.0	16.35
N305	009	007	1977	4.3	4.7	13.90	25.0	16.35
N305	009	009	1977	20.6	22.5	0.70	20.5	13.60
N305	009	009	1977	19.1	20.5	1.40	20.5	13.60
N305	009	009	1977	17.4	18.3	2.45	20.5	13.60
N305	009	009	1977	14.9	15.7	4.25	20.5	13.60
N305	009	009	1977	12.2	13.0	6.25	20.5	13.60
N305	009	009	1977	9.4	10.1	7.55	20.5	13.60
N305	009	009	1977	4.6	5.0	11.60	20.5	13.60
N305	010	001	1977	21.7	24.2	0.00	21.8	14.50
N305	010	001	1977	21.0	23.0	0.70	21.8	14.50
N305	010	001	1977	20.3	21.8	1.40	21.8	14.50
N305	010	001	1977	18.0	19.0	2.75	21.8	14.50
N305	010	001	1977	13.8	14.5	6.20	21.8	14.50
N305	010	001	1977	8.6	9.2	9.65	21.8	14.50
N305	010	001	1977	6.0	6.5	11.40	21.8	14.50
N305	010	003	1977	18.8	20.8	0.00	17.4	15.30
N305	010	003	1977	17.5	19.1	0.70	17.4	15.30
N305	010	003	1977	16.2	17.4	1.40	17.4	15.30
N305	010	003	1977	13.6	14.4	4.60	17.4	15.30
N305	010	003	1977	11.6	12.4	7.00	17.4	15.30
N305	010	003	1977	4.8	5.3	12.64	17.4	15.30
N305	010	005	1977	18.7	20.6	0.00	17.0	10.50
N305	010	005	1977	15.7	17.0	1.40	17.0	10.50
N305	010	005	1977	13.6	14.6	2.65	17.0	10.50
N305	010	005	1977	9.9	10.5	4.90	17.0	10.50
N305	010	005	1977	7.1	7.7	6.45	17.0	10.50
N305	010	005	1977	4.9	5.4	7.40	17.0	10.50
N305	010	007	1977	17.7	19.6	0.00	16.4	14.15
N305	010	007	1977	16.5	18.0	0.70	16.4	14.15
N305	010	007	1977	15.3	16.4	1.40	16.4	14.15
N305	010	007	1977	10.7	11.3	7.25	16.4	14.15

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	010	007	1977	8.2	8.8	9.35	16.4	14.15
N305	010	007	1977	5.8	6.3	11.15	16.4	14.15
N305	010	009	1977	17.7	20.8	0.00	16.6	13.10
N305	010	009	1977	14.8	16.6	1.40	16.6	13.10
N305	010	009	1977	13.3	14.3	3.25	16.6	13.10
N305	010	009	1977	10.6	11.4	5.30	16.6	13.10
N305	010	009	1977	8.6	9.2	7.90	16.6	13.10
N305	010	009	1977	6.1	6.7	9.50	16.6	13.10
N305	011	001	1977	20.2	22.9	0.00	21.5	12.10
N305	011	001	1977	19.8	22.2	0.70	21.5	12.10
N305	011	001	1977	19.5	21.5	1.40	21.5	12.10
N305	011	001	1977	17.7	19.5	1.65	21.5	12.10
N305	011	001	1977	11.2	12.0	3.65	21.5	12.10
N305	011	001	1977	10.9	11.7	4.10	21.5	12.10
N305	011	001	1977	8.7	9.4	7.20	21.5	12.10
N305	011	003	1977	17.4	20.1	0.00	18.1	12.40
N305	011	003	1977	16.7	19.1	0.70	18.1	12.40
N305	011	003	1977	12.2	13.5	3.50	18.1	12.40
N305	011	003	1977	9.7	10.5	6.15	18.1	12.40
N305	011	003	1977	7.4	8.0	7.95	18.1	12.40
N305	011	003	1977	5.1	5.6	9.40	18.1	12.40
N305	011	005	1977	17.0	19.2	0.00	15.4	11.90
N305	011	005	1977	15.5	17.3	0.70	15.4	11.90
N305	011	005	1977	14.0	15.4	1.40	15.4	11.90
N305	011	005	1977	11.6	12.4	3.25	15.4	11.90
N305	011	005	1977	6.6	7.2	7.80	15.4	11.90
N305	011	005	1977	4.1	4.5	10.08	15.4	11.90
N305	011	007	1977	24.5	26.8	0.00	21.0	15.60
N305	011	007	1977	19.4	21.0	1.40	21.0	15.60
N305	011	007	1977	15.6	16.4	4.90	21.0	15.60
N305	011	007	1977	12.6	13.3	7.05	21.0	15.60
N305	011	007	1977	10.4	11.0	8.53	21.0	15.60
N305	011	007	1977	8.0	8.6	10.45	21.0	15.60
N305	011	007	1977	5.6	6.1	12.10	21.0	15.60
N305	011	009	1977	15.9	17.4	0.70	16.2	11.15
N305	011	009	1977	15.0	16.2	1.40	16.2	11.15
N305	011	009	1977	12.6	13.2	3.10	16.2	11.15
N305	011	009	1977	11.2	11.7	4.82	16.2	11.15
N305	011	009	1977	8.4	8.8	7.20	16.2	11.15
N305	011	009	1977	5.8	6.2	8.70	16.2	11.15
N305	014	001	1977	19.2	22.3	0.00	20.1	14.50
N305	014	001	1977	18.5	21.2	0.70	20.1	14.50
N305	014	001	1977	15.8	17.2	2.60	20.1	14.50
N305	014	001	1977	13.9	14.8	5.07	20.1	14.50
N305	014	001	1977	12.0	12.8	6.85	20.1	14.50
N305	014	001	1977	9.3	10.1	8.88	20.1	14.50
N305	014	001	1977	6.4	7.2	10.67	20.1	14.50
N305	014	003	1977	17.9	20.2	0.00	17.4	14.02
N305	014	003	1977	13.4	14.4	4.85	17.4	14.02
N305	014	003	1977	11.2	12.0	6.80	17.4	14.02
N305	014	003	1977	8.7	9.5	8.55	17.4	14.02
N305	014	003	1977	6.7	7.3	10.50	17.4	14.02

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	014	003	1977	4.0	4.6	12.34	17.4	14.02
N305	014	005	1977	12.9	14.3	0.70	13.5	11.69
N305	014	005	1977	12.3	13.5	1.40	13.5	11.69
N305	014	005	1977	11.5	12.5	2.03	13.5	11.69
N305	014	005	1977	10.3	11.2	3.50	13.5	11.69
N305	014	005	1977	8.8	9.4	4.85	13.5	11.69
N305	014	005	1977	7.7	8.3	5.90	13.5	11.69
N305	014	005	1977	7.0	7.6	6.60	13.5	11.69
N305	014	005	1977	6.2	6.7	7.38	13.5	11.69
N305	014	005	1977	4.9	5.4	8.29	13.5	11.69
N305	014	007	1977	18.2	21.2	0.70	19.6	11.43
N305	014	007	1977	17.4	19.6	1.40	19.6	11.43
N305	014	007	1977	15.4	17.3	2.70	19.6	11.43
N305	014	007	1977	14.2	15.2	4.85	19.6	11.43
N305	014	007	1977	8.5	9.2	7.35	19.6	11.43
N305	014	007	1977	6.5	7.1	8.51	19.6	11.43
N305	014	009	1977	22.7	26.5	0.00	22.5	15.45
N305	014	009	1977	21.5	24.5	0.70	22.5	15.45
N305	014	009	1977	20.3	22.5	1.40	22.5	15.45
N305	014	009	1977	18.6	20.0	2.43	22.5	15.45
N305	014	009	1977	14.5	15.5	6.20	22.5	15.45
N305	014	009	1977	11.6	12.6	8.20	22.5	15.45
N305	014	009	1977	9.2	10.0	9.85	22.5	15.45
N305	014	009	1977	6.9	7.7	11.00	22.5	15.45

Appendix 22. Sectional measurement data for Harakeke.
(20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	001	013	1973	25.9	28.7	15.30	43.9	30.77
N263	001	013	1973	23.4	26.2	16.64	43.9	30.77
N263	001	013	1973	11.5	13.5	23.90	43.9	30.77
N263	001	017	1973	27.4	29.7	12.56	42.4	30.77
N263	001	017	1973	18.2	19.6	21.70	42.4	30.77
N263	001	017	1973	12.7	14.2	24.90	42.4	30.77
N263	001	019	1973	28.5	30.5	16.31	48.3	34.75
N263	001	019	1973	26.0	27.9	19.45	48.3	34.75
N263	001	019	1973	20.6	22.9	23.07	48.3	34.75
N263	001	021	1973	12.3	13.7	18.99	26.4	26.66
N263	001	021	1973	5.1	6.1	23.93	26.4	26.66
N263	001	022	1973	32.0	40.1	0.00	37.1	30.77
N263	001	022	1973	29.4	34.5	2.41	37.1	30.77
N263	001	022	1973	8.1	9.1	27.74	37.1	30.77
N263	002	005	1973	30.6	36.3	0.70	35.3	34.89
N263	002	005	1973	30.2	35.3	1.40	35.3	34.89
N263	002	005	1973	16.2	17.5	24.54	35.3	34.89
N263	002	006	1973	64.9	72.4	0.00	67.8	41.75
N263	002	006	1973	37.2	39.9	20.48	67.8	41.75
N263	002	006	1973	29.8	32.3	26.27	67.8	41.75
N263	002	006	1973	27.4	29.7	27.71	67.8	41.75
N263	002	006	1973	13.0	14.5	35.72	67.8	41.75
N263	002	007	1973	28.7	34.8	1.40	34.8	30.77
N263	002	007	1973	20.1	22.1	12.28	34.8	30.77
N263	002	007	1973	17.6	19.6	17.59	34.8	30.77
N263	002	027	1973	45.6	54.1	1.83	56.6	36.72
N263	002	027	1973	33.6	36.3	15.12	56.6	36.72
N263	002	027	1973	21.8	23.6	26.52	56.6	36.72
N263	002	027	1973	19.3	21.1	27.83	56.6	36.72
N263	003	005	1973	28.2	33.7	0.00	29.7	29.71
N263	003	005	1973	25.0	29.7	1.40	29.7	29.71
N263	003	007	1973	47.7	56.6	0.00	51.6	37.18
N263	003	007	1973	41.8	46.5	3.26	51.6	37.18
N263	003	007	1973	36.1	38.9	10.45	51.6	37.18
N263	003	007	1973	14.5	16.0	30.94	51.6	37.18
N263	003	019	1973	49.1	57.1	0.70	54.4	33.52
N263	003	019	1973	16.6	18.8	27.98	54.4	33.52
N263	003	019	1973	12.2	13.7	29.35	54.4	33.52
N263	003	019	1973	9.9	11.2	30.48	54.4	33.52
N263	003	022	1973	45.8	55.6	0.70	53.6	35.80
N263	003	022	1973	43.2	51.1	2.50	53.6	35.80
N263	003	022	1973	25.5	28.2	22.01	53.6	35.80
N263	003	022	1973	20.6	23.1	25.05	53.6	35.80
N263	003	023	1973	17.8	20.3	3.26	25.4	24.98
N263	003	023	1973	11.2	12.7	18.65	25.4	24.98
N263	004	006	1973	49.7	56.9	0.70	54.4	35.36
N263	004	006	1973	47.0	54.4	1.40	54.4	35.36
N263	004	006	1973	42.2	46.7	5.24	54.4	35.36
N263	004	006	1973	9.7	11.2	31.03	54.4	35.36
N263	004	010	1973	14.4	20.6	0.70	19.6	24.83
N263	004	015	1973	44.7	53.3	0.00	48.3	37.48
N263	004	015	1973	31.0	35.6	8.72	48.3	37.48

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N263	004	015	1973	28.9	33.0	11.95	48.3	37.48
N263	004	015	1973	6.7	7.6	33.89	48.3	37.48
N263	004	020	1973	20.3	26.7	1.40	26.7	28.34
N263	004	020	1973	19.8	24.1	2.32	26.7	28.34
N263	005	002	1973	24.6	31.0	1.40	31.0	33.82
N263	005	002	1973	21.2	23.4	8.60	31.0	33.82
N263	005	005	1973	25.0	33.3	1.40	33.3	34.75
N263	005	005	1973	20.3	23.1	10.15	33.3	34.75
N263	005	005	1973	9.4	10.4	27.10	33.3	34.75
N263	005	026	1973	45.8	54.9	2.23	57.4	42.67
N263	005	026	1973	40.3	44.7	9.75	57.4	42.67
N263	005	026	1973	31.5	34.5	18.65	57.4	42.67
N263	005	026	1973	8.1	9.1	37.86	57.4	42.67
N263	005	029	1973	40.6	46.7	7.28	59.4	43.42
N263	005	029	1973	38.2	44.2	10.27	59.4	43.42
N263	005	029	1973	21.4	23.9	29.72	59.4	43.42
N263	005	029	1973	16.9	18.8	32.83	59.4	43.42
N263	005	029	1973	14.1	16.3	34.14	59.4	43.42
N263	006	005	1973	46.6	55.4	0.70	52.8	38.09
N263	006	005	1973	34.6	37.8	13.78	52.8	38.09
N263	006	005	1973	30.0	32.8	18.78	52.8	38.09
N263	006	005	1973	28.2	30.2	20.67	52.8	38.09
N263	006	008	1973	43.9	50.8	1.40	50.8	42.81
N263	006	008	1973	41.6	48.3	2.13	50.8	42.81
N263	006	008	1973	11.7	12.7	36.15	50.8	42.81
N263	006	008	1973	9.2	10.2	37.86	50.8	42.81
N263	006	032	1973	14.1	15.5	16.52	25.7	29.86
N263	006	032	1973	6.9	7.9	25.85	25.7	29.86
N263	006	043	1973	17.1	21.6	1.40	21.6	26.20
N263	006	043	1973	15.8	19.0	2.93	21.6	26.20
N263	006	046	1973	38.5	44.7	3.84	49.8	40.38
N263	006	046	1973	24.7	26.9	22.31	49.8	40.38
N263	006	046	1973	20.3	21.8	27.43	49.8	40.38
N263	006	046	1973	15.5	16.8	31.24	49.8	40.38
N435	001	016	1975	7.4	7.9	0.00	5.7	4.56
N435	001	013	1975	4.7	5.1	2.02	5.6	4.39
N435	001	007	1975	4.7	5.0	4.85	9.0	7.97
N435	001	007	1975	5.9	6.3	3.67	10.3	6.80
N435	001	007	1975	4.9	5.3	4.15	10.3	6.80
N435	001	009	1975	7.1	7.7	1.40	7.7	7.16
N435	001	003	1975	9.3	10.0	1.86	11.0	7.30
N435	001	003	1975	4.4	5.0	5.28	11.0	7.30
N435	001	006	1975	14.1	15.6	0.70	14.0	7.84
N435	001	006	1975	12.1	13.0	1.70	14.0	7.84
N435	001	007	1975	5.4	5.7	0.00	5.3	4.95
N435	001	018	1975	11.9	13.1	0.70	11.9	8.32
N435	001	018	1975	10.3	10.9	1.88	11.9	8.32
N435	001	006	1975	10.2	10.9	1.40	10.9	7.57
N435	001	006	1975	7.4	7.9	3.55	10.9	7.57
N435	001	021	1975	4.2	4.6	1.40	4.6	3.87
N435	001	014	1975	10.9	11.7	1.40	11.7	8.38
N435	001	014	1975	5.3	5.7	5.65	11.7	8.38

Appendix 22. Sectional measurement data for Harakeke.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	001	002	1979	13.7	14.8	0.00	13.2	12.11
N435	001	002	1979	10.7	11.1	3.27	13.2	12.11
N435	001	003	1979	9.8	10.2	3.89	13.2	11.54
N435	001	003	1979	8.8	9.1	4.65	13.2	11.54
N435	001	008	1979	22.7	25.1	0.00	20.7	13.83
N435	001	008	1979	20.9	22.9	0.70	20.7	13.83
N435	001	011	1979	19.9	21.9	0.70	20.9	15.66
N435	001	011	1979	18.9	20.9	1.40	20.9	15.66
N435	002	002	1979	11.4	11.8	3.57	14.6	10.98
N435	002	002	1979	9.1	9.3	5.15	14.6	10.98
N435	002	003	1979	11.0	11.4	5.68	16.4	11.23
N435	002	005	1979	26.6	28.6	0.00	21.6	14.67
N435	002	005	1979	6.9	7.1	11.35	21.6	14.67
N435	002	009	1979	20.7	22.3	0.70	20.7	15.45
N435	002	009	1979	16.8	17.5	3.08	20.7	15.45
N435	003	005	1979	10.1	10.3	3.54	12.5	11.64
N435	003	005	1979	9.2	9.4	4.71	12.5	11.64
N435	003	006	1979	7.2	7.4	9.51	22.4	13.97
N435	003	006	1979	4.6	4.8	10.84	22.4	13.97
N435	003	011	1979	13.2	14.4	0.70	13.7	11.38
N435	003	011	1979	9.5	9.7	4.71	13.7	11.38
N435	003	012	1979	22.5	24.9	0.70	22.9	13.59
N435	003	012	1979	5.1	5.3	11.24	22.9	13.59
N435	003	015	1979	20.8	23.2	0.70	21.8	14.57
N435	003	015	1979	15.8	16.6	4.52	21.8	14.57
N435	004	001	1979	17.0	17.8	1.40	17.8	12.55
N435	004	001	1979	12.3	12.7	4.72	17.8	12.55
N435	004	009	1979	19.7	21.7	1.40	21.7	14.77
N435	004	009	1979	13.7	14.1	5.81	21.7	14.77
N435	004	016	1979	7.7	7.9	4.98	9.8	10.94
N435	004	018	1979	22.9	25.9	0.00	22.1	14.68
N435	004	018	1979	16.4	17.1	4.21	22.1	14.68
N435	004	022	1979	5.6	5.8	5.90	8.7	10.28
N435	005	004	1979	16.6	17.8	1.40	17.8	13.91
N435	005	004	1979	12.6	13.0	5.98	17.8	13.91
N435	005	005	1979	18.7	21.1	0.70	20.1	14.31
N435	005	005	1979	14.3	15.1	4.01	20.1	14.31
N435	005	008	1979	14.4	14.8	6.51	19.4	15.00
N435	005	008	1979	9.1	9.4	10.05	19.4	15.00
N435	005	015	1979	8.3	8.5	5.66	12.5	12.11
N435	005	015	1979	7.4	7.6	6.84	12.5	12.11
N435	005	017	1979	9.3	9.5	5.61	13.5	11.92
N435	005	017	1979	7.2	7.4	7.43	13.5	11.92
N435	006	002	1979	16.1	18.5	0.00	15.3	12.31
N435	006	005	1979	8.5	8.7	7.61	16.3	12.71
N435	006	014	1979	22.7	25.1	0.70	21.8	14.35
N435	006	014	1979	7.3	7.5	10.14	21.8	14.35
N435	006	020	1979	24.8	28.0	0.00	23.6	14.34
N435	006	020	1979	18.8	20.0	2.51	23.6	14.34
N435	006	022	1979	19.8	22.2	0.00	21.0	12.94
N435	006	022	1979	17.5	18.3	2.65	21.0	12.94
N435	007	006	1979	27.3	29.9	0.00	23.9	13.45

Appendix 22. Sectionol measurement doto for Horokeke.
(cont.) (20% sub-somple)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N435	007	006	1979	24.5	26.9	0.70	23.9	13.45
N435	007	014	1979	22.7	25.1	0.00	22.7	13.54
N435	007	014	1979	21.1	22.7	1.40	22.7	13.54
N435	007	016	1979	12.2	13.0	1.40	13.0	10.50
N435	007	016	1979	8.5	8.9	5.00	13.0	10.50
N435	007	018	1979	12.7	13.8	1.40	13.8	11.01
N435	007	018	1979	7.4	7.8	6.17	13.8	11.01
N435	007	020	1979	18.5	19.8	1.40	19.8	13.03
N435	007	020	1979	14.5	14.9	4.38	19.8	13.03
N435	008	001	1979	7.7	8.1	7.81	15.5	12.58
N435	008	002	1979	10.3	11.5	0.70	11.0	10.58
N435	008	002	1979	8.6	9.0	4.25	11.0	10.58
N435	008	008	1979	14.8	16.4	1.40	16.4	10.90
N435	008	010	1979	6.2	6.4	5.11	9.5	9.54
N435	008	016	1979	16.1	18.1	0.00	15.9	12.43
N435	009	001	1979	20.9	22.1	1.40	22.1	14.36
N435	009	001	1979	9.0	9.4	9.15	22.1	14.36
N435	009	002	1979	12.9	13.7	2.91	16.2	13.82
N435	009	010	1979	15.0	16.6	1.40	16.6	13.13
N435	009	018	1979	21.8	25.0	0.00	21.2	14.80
N435	009	018	1979	15.4	16.2	4.63	21.2	14.80
N435	010	001	1979	9.2	9.6	4.71	12.6	12.37
N435	010	001	1979	5.4	5.6	9.79	12.6	12.37
N435	010	002	1979	20.4	23.1	0.00	19.1	12.10
N435	010	002	1979	13.7	14.1	3.90	19.1	12.10
N435	010	004	1979	10.9	11.1	2.20	12.1	10.46
N435	010	004	1979	8.8	9.0	4.56	12.1	10.46
N435	010	005	1979	20.6	22.8	0.00	19.0	13.46
N435	010	005	1979	6.3	6.5	9.38	19.0	13.46
N435	010	006	1979	17.6	19.0	1.40	19.0	14.54
N435	010	006	1979	11.1	11.5	6.65	19.0	14.54
N435	011	001	1979	12.2	15.0	0.00	12.2	10.45
N435	011	001	1979	11.6	13.6	0.70	12.2	10.45
N435	011	010	1979	11.1	11.3	3.12	14.4	10.27
N435	011	010	1979	8.2	8.4	5.64	14.4	10.27
N435	011	014	1979	12.5	13.3	2.26	14.2	11.07
N435	011	014	1979	6.0	6.2	7.24	14.2	11.07
N435	011	016	1979	8.1	8.3	2.24	9.4	7.97
N435	011	017	1979	5.0	5.2	5.56	8.2	8.70
N435	012	007	1979	19.6	22.0	0.00	18.4	10.72
N435	012	007	1979	16.8	18.4	1.40	18.4	10.72
N435	012	011	1979	16.8	18.8	1.40	18.8	12.03
N435	012	011	1979	15.1	16.3	2.91	18.8	12.03
N435	012	018	1979	12.8	14.0	0.70	12.4	9.76
N435	012	018	1979	6.8	7.0	5.39	12.4	9.76
N435	012	019	1979	6.5	6.7	5.45	11.7	9.72
N435	012	019	1979	5.5	5.7	6.38	11.7	9.72
N435	012	022	1979	17.8	19.8	0.70	18.8	11.45
N435	012	022	1979	17.2	18.8	1.40	18.8	11.45
N305	001	001	1977	16.0	21.2	0.00	17.4	10.40
N305	001	001	1977	12.8	15.2	2.10	17.4	10.40
N305	001	003	1977	7.0	7.7	4.44	12.3	9.90

Appendix 22. Sectional measurement data for Harakeke.
(cont.)   (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	001	003	1977	5.1	5.6	6.30	12.3	9.90
N305	001	005	1977	10.7	12.0	0.70	10.6	8.05
N305	001	005	1977	6.9	7.5	3.35	10.6	8.05
N305	001	007	1977	10.3	11.0	4.35	14.5	12.60
N305	001	007	1977	5.2	5.5	9.65	14.5	12.60
N305	001	009	1977	5.9	6.3	8.50	12.3	11.57
N305	001	009	1977	5.0	5.4	9.05	12.3	11.57
N305	002	001	1977	15.2	17.1	0.00	14.5	9.35
N305	002	001	1977	5.0	5.4	7.10	14.5	9.35
N305	002	003	1977	8.5	9.1	2.10	10.5	6.60
N305	002	003	1977	7.5	8.1	2.83	10.5	6.60
N305	002	006	1977	18.5	20.5	1.40	20.5	12.18
N305	002	006	1977	16.8	18.7	1.90	20.5	12.18
N305	002	007	1977	12.3	13.0	4.00	18.0	12.50
N305	002	007	1977	7.8	8.4	7.25	18.0	12.50
N305	002	009	1977	16.8	18.7	0.00	15.3	11.45
N305	003	001	1977	20.8	24.8	0.00	20.0	11.60
N305	003	001	1977	17.7	20.0	1.40	20.0	11.60
N305	003	003	1977	16.4	18.0	1.40	18.0	11.60
N305	003	003	1977	5.3	5.8	8.60	18.0	11.60
N305	003	005	1977	13.8	15.1	1.40	15.1	11.48
N305	003	007	1977	14.0	14.8	5.15	25.8	14.05
N305	003	009	1977	13.2	14.3	0.70	13.0	9.82
N305	003	009	1977	8.8	9.2	4.15	13.0	9.82
N305	004	001	1977	13.6	14.8	2.90	17.6	12.25
N305	004	001	1977	11.3	12.1	4.30	17.6	12.25
N305	004	003	1977	17.3	18.7	0.00	15.5	11.80
N305	004	005	1977	14.8	16.6	2.10	17.9	12.08
N305	004	005	1977	4.9	5.4	9.10	17.9	12.08
N305	004	007	1977	11.1	11.8	4.85	17.0	11.70
N305	004	007	1977	4.6	5.0	9.20	17.0	11.70
N305	004	009	1977	15.4	17.0	1.40	17.0	14.30
N305	004	009	1977	4.9	5.3	10.82	17.0	14.30
N305	005	002	1977	14.0	14.8	3.20	18.1	11.80
N305	005	002	1977	7.5	8.0	7.60	18.1	11.80
N305	005	003	1977	17.8	20.0	1.40	20.0	12.75
N305	005	003	1977	5.5	6.0	9.40	20.0	12.75
N305	005	005	1977	16.6	18.5	1.40	18.5	12.30
N305	005	005	1977	10.5	11.2	6.35	18.5	12.30
N305	005	007	1977	9.2	9.7	3.20	11.0	10.50
N305	005	007	1977	7.3	7.8	5.60	11.0	10.50
N305	005	009	1977	13.4	14.8	0.00	12.0	10.80
N305	005	009	1977	7.6	8.0	5.30	12.0	10.80
N305	006	001	1977	14.3	15.6	2.35	18.0	12.35
N305	006	001	1977	12.3	13.1	3.55	18.0	12.35
N305	006	003	1977	14.2	15.6	1.40	15.6	11.55
N305	006	005	1977	15.4	16.4	1.40	16.4	12.30
N305	006	007	1977	13.8	15.7	0.70	14.5	11.10
N305	006	007	1977	10.4	11.2	3.20	14.5	11.10
N305	006	009	1977	19.3	21.0	1.40	21.0	13.35
N305	006	009	1977	17.7	18.9	2.40	21.0	13.35
N305	007	001	1977	19.2	20.8	0.70	18.9	14.10

Appendix 22. Sectional measurement data for Horokeke.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N305	007	001	1977	5.8	6.2	10.20	18.9	14.10
N305	007	003	1977	8.7	9.3	6.25	17.0	12.05
N305	007	005	1977	19.5	22.0	0.00	17.0	11.95
N305	007	008	1977	20.2	22.4	0.70	20.5	14.30
N305	007	008	1977	7.8	8.4	9.55	20.5	14.30
N305	007	009	1977	19.6	21.9	0.00	19.5	12.55
N305	007	009	1977	10.4	11.0	6.00	19.5	12.55
N305	008	001	1977	19.8	21.4	1.40	21.4	11.20
N305	008	001	1977	12.4	13.7	4.03	21.4	11.20
N305	008	003	1977	14.5	16.1	1.40	16.1	10.15
N305	008	005	1977	16.8	18.9	1.40	18.9	12.70
N305	008	005	1977	10.4	11.0	5.70	18.9	12.70
N305	008	008	1977	16.4	18.2	0.70	16.7	11.85
N305	008	009	1977	17.1	19.0	1.40	19.0	12.25
N305	008	009	1977	10.6	11.3	7.90	19.0	12.25
N305	009	001	1977	15.6	16.6	2.85	19.0	13.10
N305	009	001	1977	13.7	14.5	4.25	19.0	13.10
N305	009	003	1977	18.7	21.0	0.00	17.4	12.15
N305	009	003	1977	4.6	5.0	9.85	17.4	12.15
N305	009	005	1977	19.0	21.9	0.00	19.1	12.20
N305	009	005	1977	13.3	14.1	4.10	19.1	12.20
N305	009	007	1977	9.1	9.8	10.33	25.0	16.35
N305	009	009	1977	22.1	24.5	0.00	20.5	13.60
N305	009	009	1977	7.7	8.1	9.35	20.5	13.60
N305	010	001	1977	15.5	16.3	4.80	21.8	14.50
N305	010	001	1977	10.7	11.4	8.00	21.8	14.50
N305	010	003	1977	9.3	9.9	9.00	17.4	15.30
N305	010	003	1977	7.0	7.6	10.82	17.4	15.30
N305	010	005	1977	17.2	18.8	0.70	17.0	10.50
N305	010	005	1977	12.1	12.9	4.10	17.0	10.50
N305	010	007	1977	13.2	13.8	4.27	16.4	14.15
N305	010	009	1977	16.3	18.7	0.70	16.6	13.10
N305	011	001	1977	14.8	16.1	2.70	21.5	12.10
N305	011	001	1977	6.0	6.7	9.20	21.5	12.10
N305	011	003	1977	16.1	18.1	1.40	18.1	12.40
N305	011	003	1977	14.1	15.8	2.10	18.1	12.40
N305	011	005	1977	9.3	9.9	5.35	15.4	11.90
N305	011	007	1977	21.9	23.9	0.70	21.0	15.60
N305	011	007	1977	17.9	18.9	2.50	21.0	15.60
N305	011	009	1977	16.9	18.6	0.00	16.2	11.15
N305	014	001	1977	17.8	20.1	1.40	20.1	14.50
N305	014	001	1977	4.4	5.0	12.20	20.1	14.50
N305	014	003	1977	16.8	18.8	0.70	17.4	14.02
N305	014	003	1977	15.8	17.4	1.40	17.4	14.02
N305	014	005	1977	13.6	15.1	0.00	13.5	11.69
N305	014	005	1977	9.8	10.5	4.01	13.5	11.69
N305	014	007	1977	19.1	22.8	0.00	19.6	11.43
N305	014	007	1977	11.6	12.4	5.55	19.6	11.43
N305	014	009	1977	16.7	17.7	4.10	22.5	15.45
N305	014	009	1977	4.8	5.4	12.70	22.5	15.45

Appendix 23. Summary of sectionally measured trees for Harakeke.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N263	001	013	1973	43.9	30.77	1.5823274	1.9558430
N263	001	017	1973	42.4	30.77	1.4743104	1.8466964
N263	001	019	1973	48.3	34.75	2.1127415	2.5521502
N263	001	021	1973	26.4	26.66	0.5731505	0.7034483
N263	001	022	1973	37.1	30.77	1.1899529	1.4563842
N263	002	005	1973	35.3	34.89	1.2165213	1.4311798
N263	002	006	1973	67.8	41.75	4.8247643	5.7903748
N263	002	007	1973	34.8	30.77	0.8991251	1.1455045
N263	002	027	1973	56.6	36.72	2.8347135	3.4903526
N263	003	005	1973	29.7	29.71	0.6977091	0.8928032
N263	003	007	1973	51.6	37.18	2.6172910	3.1477470
N263	003	019	1973	54.4	33.52	2.7054048	3.3894749
N263	003	022	1973	53.6	35.80	2.4936743	3.1703339
N263	003	023	1973	25.4	24.98	0.4130723	0.5583433
N263	004	006	1973	54.4	35.36	2.6507382	3.3010092
N263	004	010	1973	19.6	24.83	0.2159258	0.3009165
N263	004	015	1973	48.3	37.48	1.8665247	2.4957943
N263	004	020	1973	26.7	28.34	0.4272847	0.5985446
N263	005	002	1973	31.0	33.82	0.7437426	0.9934840
N263	005	005	1973	33.3	34.75	0.7625289	1.0720284
N263	005	026	1973	57.4	42.67	3.1401482	4.0263796
N263	005	029	1973	59.4	43.42	3.2551508	4.2682791
N263	006	005	1973	52.8	38.09	2.6552005	3.3149366
N263	006	008	1973	50.8	42.81	2.6142087	3.1245794
N263	006	032	1973	25.7	29.86	0.5178788	0.6436013
N263	006	043	1973	21.6	26.20	0.2812039	0.3814123
N263	006	046	1973	49.8	40.38	2.3926392	3.0311718
N435	001	016	1975	5.7	4.56	0.0071473	0.0081139
N435	001	013	1975	5.6	4.39	0.0074675	0.0086339
N435	001	007	1975	9.0	7.97	0.0236707	0.0269797
N435	001	007	1975	10.3	6.80	0.0244479	0.0283130
N435	001	009	1975	7.7	7.16	0.0153243	0.0179871
N435	001	003	1975	11.0	7.30	0.0308383	0.0365666
N435	001	006	1975	14.0	7.84	0.0475847	0.0562327
N435	001	007	1975	5.3	4.95	0.0051888	0.0058893
N435	001	018	1975	11.9	8.32	0.0403465	0.0473792
N435	001	006	1975	10.9	7.57	0.0334676	0.0379397
N435	001	021	1975	4.6	3.87	0.0041505	0.0048532
N435	001	014	1975	11.7	8.38	0.0389667	0.0445532
N435	001	002	1979	13.2	12.11	0.0724619	0.0791034
N435	001	003	1979	13.2	11.54	0.0649402	0.0723557
N435	001	008	1979	20.7	13.83	0.1755030	0.1965202
N435	001	011	1979	20.9	15.66	0.2032281	0.2258450
N435	002	002	1979	14.6	10.98	0.0798762	0.0861315
N435	002	003	1979	16.4	11.23	0.1165816	0.1285550
N435	002	005	1979	21.6	14.67	0.2042038	0.2250775
N435	002	009	1979	20.7	15.45	0.1982479	0.2190216
N435	003	005	1979	12.5	11.64	0.0657657	0.0719753
N435	003	006	1979	22.4	13.97	0.2014655	0.2231933
N435	003	011	1979	13.7	11.38	0.0699257	0.0769858
N435	003	012	1979	22.9	13.59	0.2014896	0.2345335
N435	003	015	1979	21.8	14.57	0.1944199	0.2244652
N435	004	001	1979	17.8	12.55	0.1232678	0.1361473

Appendix 23. Summary of sectionally measured trees for
(cont.) Harakeke.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N435	004	009	1979	21.7	14.77	0.1879108	0.2140116
N435	004	016	1979	9.8	10.94	0.0436255	0.0483060
N435	004	018	1979	22.1	14.68	0.2142584	0.2422543
N435	004	022	1979	8.7	10.28	0.0290096	0.0341511
N435	005	004	1979	17.8	13.91	0.1473534	0.1688993
N435	005	005	1979	20.1	14.31	0.1638262	0.1885797
N435	005	008	1979	19.4	15.00	0.1968003	0.2236583
N435	005	015	1979	12.5	12.11	0.0692187	0.0740429
N435	005	017	1979	13.5	11.92	0.0729660	0.0818034
N435	006	002	1979	15.3	12.31	0.0894615	0.1046372
N435	006	005	1979	16.3	12.71	0.1164813	0.1272194
N435	006	014	1979	21.8	14.35	0.1973756	0.2269647
N435	006	020	1979	23.6	14.34	0.2218342	0.2536291
N435	006	022	1979	21.0	12.94	0.1700390	0.1889958
N435	007	006	1979	23.9	13.45	0.2190212	0.2531316
N435	007	014	1979	22.7	13.54	0.1888149	0.2168119
N435	007	016	1979	13.0	10.50	0.0671321	0.0733512
N435	007	018	1979	13.8	11.01	0.0676256	0.0788638
N435	007	020	1979	19.8	13.03	0.1561508	0.1723872
N435	008	001	1979	15.5	12.58	0.0940915	0.1096676
N435	008	002	1979	11.0	10.58	0.0469593	0.0533086
N435	008	008	1979	16.4	10.90	0.0927114	0.1097828
N435	008	010	1979	9.5	9.54	0.0318487	0.0357637
N435	008	016	1979	15.9	12.43	0.0985157	0.1111949
N435	009	001	1979	22.1	14.36	0.2013244	0.2239636
N435	009	002	1979	16.2	13.82	0.1129943	0.1324565
N435	009	010	1979	16.6	13.13	0.1171347	0.1353810
N435	009	018	1979	21.2	14.80	0.1987391	0.2265310
N435	010	001	1979	12.6	12.37	0.0683558	0.0757875
N435	010	002	1979	19.1	12.10	0.1309196	0.1474460
N435	010	004	1979	12.1	10.46	0.0579016	0.0622411
N435	010	005	1979	19.0	13.46	0.1320201	0.1518859
N435	010	006	1979	19.0	14.54	0.1560787	0.1760311
N435	011	001	1979	12.2	10.45	0.0526553	0.0617248
N435	011	010	1979	14.4	10.27	0.0700853	0.0749918
N435	011	014	1979	14.2	11.07	0.0743535	0.0843488
N435	011	016	1979	9.4	7.97	0.0252068	0.0279927
N435	011	017	1979	8.2	8.70	0.0226557	0.0244691
N435	012	007	1979	18.4	10.72	0.1102980	0.1255934
N435	012	011	1979	18.8	12.03	0.1318634	0.1562077
N435	012	018	1979	12.4	9.76	0.0540980	0.0597637
N435	012	019	1979	11.7	9.72	0.0437572	0.0543235
N435	012	022	1979	18.8	11.45	0.1224706	0.1411802
N305	001	001	1977	17.4	10.40	0.0709257	0.0993247
N305	001	003	1977	12.3	9.90	0.0447447	0.0547893
N305	001	005	1977	10.6	8.05	0.0294542	0.0361034
N305	001	007	1977	14.5	12.60	0.0822245	0.0964320
N305	001	009	1977	12.3	11.57	0.0639737	0.0732847
N305	002	001	1977	14.5	9.35	0.0657598	0.0765540
N305	002	003	1977	10.5	6.60	0.0275628	0.0331785
N305	002	006	1977	20.5	12.18	0.1393580	0.1681910
N305	002	007	1977	18.0	12.50	0.1092748	0.1312872
N305	002	009	1977	15.3	11.45	0.0846226	0.0973479

Appendix 23. Summary of sectionally measured trees for
(cont.) Harakeke.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N305	003	001	1977	20.0	11.60	0.1132382	0.1422759
N305	003	003	1977	18.0	11.60	0.0984681	0.1162879
N305	003	005	1977	15.1	11.48	0.0741473	0.0867237
N305	003	007	1977	25.8	14.05	0.2173598	0.2695560
N305	003	009	1977	13.0	9.82	0.0558003	0.0632405
N305	004	001	1977	17.6	12.25	0.1052432	0.1274227
N305	004	003	1977	15.5	11.80	0.0875193	0.1002127
N305	004	005	1977	17.9	12.08	0.0966363	0.1210096
N305	004	007	1977	17.0	11.70	0.0981759	0.1161347
N305	004	009	1977	17.0	14.30	0.1126439	0.1310464
N305	005	002	1977	18.1	11.80	0.1182906	0.1378276
N305	005	003	1977	20.0	12.75	0.1318275	0.1603451
N305	005	005	1977	18.5	12.30	0.1243454	0.1475029
N305	005	007	1977	11.0	10.50	0.0486129	0.0543302
N305	005	009	1977	12.0	10.80	0.0544791	0.0623697
N305	006	001	1977	18.0	12.35	0.1108984	0.1325958
N305	006	003	1977	15.6	11.55	0.0917313	0.1072759
N305	006	005	1977	16.4	12.30	0.0996219	0.1147133
N305	006	007	1977	14.5	11.10	0.0661691	0.0791250
N305	006	009	1977	21.0	13.35	0.1744624	0.2024622
N305	007	001	1977	18.9	14.10	0.1413749	0.1620490
N305	007	003	1977	17.0	12.05	0.0998684	0.1182247
N305	007	005	1977	17.0	11.95	0.1069742	0.1254120
N305	007	008	1977	20.5	14.30	0.1785689	0.2072452
N305	007	009	1977	19.5	12.55	0.1334547	0.1564455
N305	008	001	1977	21.4	11.20	0.1416293	0.1659799
N305	008	003	1977	16.1	10.15	0.0850238	0.1025589
N305	008	005	1977	18.9	12.70	0.1146993	0.1400743
N305	008	008	1977	16.7	11.85	0.1044251	0.1217660
N305	008	009	1977	19.0	12.25	0.1518517	0.1802367
N305	009	001	1977	19.0	13.10	0.1393945	0.1619836
N305	009	003	1977	17.4	12.15	0.1160282	0.1352303
N305	009	005	1977	19.1	12.20	0.1251951	0.1480357
N305	009	007	1977	25.0	16.35	0.2701654	0.3127684
N305	009	009	1977	20.5	13.60	0.1705047	0.1947377
N305	010	001	1977	21.8	14.50	0.2003535	0.2283791
N305	010	003	1977	17.4	15.30	0.1533552	0.1764375
N305	010	005	1977	17.0	10.50	0.0937729	0.1094874
N305	010	007	1977	16.4	14.15	0.1338396	0.1522208
N305	010	009	1977	16.6	13.10	0.1106373	0.1340424
N305	011	001	1977	21.5	12.10	0.1240399	0.1493603
N305	011	003	1977	18.1	12.40	0.1046562	0.1296965
N305	011	005	1977	15.4	11.90	0.0867566	0.1031991
N305	011	007	1977	21.0	15.60	0.2074068	0.2359672
N305	011	009	1977	16.2	11.15	0.0990612	0.1121876
N305	014	001	1977	20.1	14.50	0.1628047	0.1963776
N305	014	003	1977	17.4	14.02	0.1406075	0.1673561
N305	014	005	1977	13.5	11.69	0.0646499	0.0766601
N305	014	007	1977	19.6	11.43	0.1334201	0.1660191
N305	014	009	1977	22.5	15.45	0.2158847	0.2576357

Appendix 24. Stand volume data for Horokeke.

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N263	001	1973	406.4	500.1	346.	37.8	33.0	32.6
N263	002	1973	691.1	839.1	309.	57.6	33.0	38.8
N263	003	1973	554.4	694.8	358.	49.6	33.0	36.4
N263	004	1973	474.9	614.2	334.	45.6	33.0	36.1
N263	005	1973	680.5	746.8	383.	52.2	33.0	41.7
N263	006	1973	692.8	942.9	569.	64.4	33.0	40.1
N435	001	1975	11.9	13.8	543.	3.6	7.1	8.9
N435	002	1975	11.9	13.8	543.	3.6	7.1	7.5
N435	003	1975	13.5	15.7	543.	4.1	7.1	7.8
N435	004	1975	8.0	9.3	543.	2.5	7.1	7.9
N435	005	1975	9.5	11.0	543.	2.9	7.1	8.1
N435	006	1975	11.5	13.3	543.	3.5	7.1	7.7
N435	007	1975	12.8	14.9	543.	3.9	7.1	8.0
N435	008	1975	5.9	6.8	543.	1.9	7.1	7.0
N435	009	1975	15.6	18.1	543.	4.7	7.1	9.5
N435	010	1975	9.3	10.8	543.	2.9	7.1	7.8
N435	011	1975	5.7	6.5	543.	1.8	7.1	6.2
N435	012	1975	9.9	11.4	543.	3.0	7.1	8.5
N435	001	1979	66.2	73.3	519.	12.2	10.8	15.1
N435	002	1979	82.7	91.0	543.	14.9	10.8	15.7
N435	003	1979	71.3	80.6	543.	14.1	10.8	14.1
N435	004	1979	48.3	54.4	494.	9.2	10.8	14.3
N435	005	1979	56.8	63.8	543.	10.0	10.8	14.6
N435	006	1979	68.2	77.0	543.	13.2	10.8	14.1
N435	007	1979	69.2	78.6	543.	14.3	10.8	13.7
N435	008	1979	35.8	41.1	543.	7.5	10.8	12.1
N435	009	1979	78.4	89.6	519.	14.4	10.8	14.7
N435	010	1979	54.2	60.8	543.	10.8	10.8	13.6
N435	011	1979	21.9	24.5	543.	5.1	10.8	10.9
N435	012	1979	44.7	52.0	543.	10.2	10.8	11.6
N305	001	1977	41.1	50.1	741.	10.0	9.0	12.0
N305	002	1977	47.2	55.5	741.	11.6	9.0	13.0
N305	003	1977	81.6	98.9	741.	20.5	9.0	13.4
N305	004	1977	74.4	88.8	741.	17.0	9.0	13.0
N305	005	1977	79.6	94.3	741.	17.7	9.0	12.9
N305	006	1977	78.7	92.2	741.	17.0	9.0	13.6
N305	007	1977	83.4	97.6	741.	18.0	9.0	13.8
N305	008	1977	88.4	105.1	741.	19.9	9.0	12.5
N305	009	1977	103.1	119.8	741.	21.2	9.0	15.6
N305	010	1977	122.5	140.6	741.	22.6	9.0	15.9
N305	011	1977	93.3	109.6	741.	20.4	9.0	14.1
N305	014	1977	112.3	135.3	741.	21.8	9.0	15.3

Appendix 25. Data for diameter distributions in Harakeke.

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N263	001	1969	11.7	30.76	100.07	346.	28.3	29.0	19.31	269	112	9	29.0
N263	001	1970	11.9	31.89	109.81	346.	30.5	30.0	19.31	269	112	9	29.0
N263	001	1971	12.2	33.00	118.67	346.	32.7	31.0	19.31	269	112	9	29.0
N263	001	1972	12.2	34.20	131.37	346.	35.2	32.0	19.31	269	112	9	29.0
N263	001	1973	12.4	35.35	145.51	346.	37.8	33.0	19.31	269	112	9	29.0
N263	002	1969	13.2	40.72	283.84	358.	54.4	29.0	25.68	269	112	9	29.0
N263	002	1970	13.5	41.86	294.86	358.	57.3	30.0	25.68	269	112	9	29.0
N263	002	1971	13.5	43.85	286.39	346.	59.8	31.0	25.68	269	112	9	29.0
N263	002	1972	13.5	44.80	295.28	346.	62.3	32.0	25.68	269	112	9	29.0
N263	002	1973	13.2	45.22	342.54	309.	57.6	33.0	25.68	269	112	9	29.0
N263	003	1969	17.0	35.88	133.51	371.	41.3	29.0	23.10	269	112	9	29.0
N263	003	1970	17.8	37.00	133.33	371.	43.6	30.0	23.10	269	112	9	29.0
N263	003	1971	18.0	38.28	139.21	371.	46.6	31.0	23.10	269	112	9	29.0
N263	003	1972	18.5	39.38	143.77	371.	49.2	32.0	23.10	269	112	9	29.0
N263	003	1973	18.8	40.18	153.66	358.	49.6	33.0	23.10	269	112	9	29.0
N263	004	1969	15.7	37.14	130.38	334.	39.5	29.0	23.27	0	0	0	29.0
N263	004	1970	16.0	37.93	138.86	334.	41.2	30.0	23.27	0	0	0	29.0
N263	004	1971	16.3	38.63	142.05	334.	42.7	31.0	23.27	0	0	0	29.0
N263	004	1972	16.3	39.36	148.30	334.	44.3	32.0	23.27	0	0	0	29.0
N263	004	1973	16.3	39.93	153.29	334.	45.7	33.0	23.27	0	0	0	29.0
N263	005	1969	21.6	37.49	68.95	383.	44.3	29.0	29.11	0	0	0	29.0
N263	005	1970	21.8	38.48	72.26	383.	46.7	30.0	29.11	0	0	0	29.0
N263	005	1971	22.1	39.28	75.69	383.	48.6	31.0	29.11	0	0	0	29.0
N263	005	1972	22.1	40.00	79.55	383.	50.5	32.0	29.11	0	0	0	29.0
N263	005	1973	22.1	40.68	83.62	383.	52.2	33.0	29.11	0	0	0	29.0
N263	006	1969	17.8	33.87	94.71	593.	57.8	29.0	27.43	0	0	0	29.0
N263	006	1970	17.8	34.44	101.69	593.	59.9	30.0	27.43	0	0	0	29.0
N263	006	1971	17.8	35.48	106.85	569.	60.9	31.0	27.43	0	0	0	29.0
N263	006	1972	17.8	36.01	114.73	569.	62.9	32.0	27.43	0	0	0	29.0
N263	006	1973	17.8	36.41	119.47	569.	64.4	33.0	27.43	0	0	0	29.0
N305	001	1972	3.5	5.28	0.90	741.	1.7	4.0	29.88	0	0	0	4.0
N305	001	1973	4.4	6.76	1.41	741.	2.7	5.1	29.88	0	0	0	4.0
N305	001	1977	8.6	12.84	6.79	741.	9.9	9.0	29.88	0	0	0	4.0
N305	002	1972	3.8	5.15	0.90	741.	1.6	4.0	29.52	0	0	0	4.0
N305	002	1973	4.9	6.95	3.12	741.	3.0	5.1	29.52	0	0	0	4.0
N305	002	1977	9.3	13.75	10.52	741.	11.5	9.0	29.52	0	0	0	4.0
N305	003	1972	4.0	5.84	2.39	741.	2.1	4.0	31.74	0	112	0	4.0
N305	003	1973	6.5	8.50	4.58	741.	4.4	5.1	31.74	0	112	0	4.0
N305	003	1977	13.0	18.40	15.09	741.	20.5	9.0	31.74	0	112	0	4.0
N305	004	1972	3.6	5.25	0.98	741.	1.7	4.0	31.25	168	0	0	4.0
N305	004	1973	6.6	8.26	1.92	741.	4.1	5.1	31.25	168	0	0	4.0
N305	004	1977	13.0	16.97	5.33	741.	17.0	9.0	31.25	168	0	0	4.0
N305	005	1972	4.7	5.90	2.39	741.	2.2	4.0	32.40	0	112	0	4.0
N305	005	1973	6.0	8.39	4.86	741.	4.3	5.1	32.40	0	112	0	4.0
N305	005	1977	11.0	17.05	15.06	741.	17.7	9.0	32.40	0	112	0	4.0
N305	006	1972	3.9	5.51	1.14	741.	1.8	4.0	30.80	0	0	0	4.0
N305	006	1973	5.7	7.92	2.39	741.	3.8	5.1	30.80	0	0	0	4.0
N305	006	1977	12.8	16.88	7.92	741.	17.0	9.0	30.80	0	0	0	4.0
N305	007	1972	4.2	5.60	2.19	741.	1.9	4.0	32.56	168	0	0	4.0
N305	007	1973	6.5	8.71	2.35	741.	4.5	5.1	32.56	168	0	0	4.0
N305	007	1977	13.2	17.47	4.53	741.	18.0	9.0	32.56	168	0	0	4.0
N305	008	1972	3.6	5.43	1.21	741.	1.8	4.0	31.26	168	112	0	4.0
N305	008	1973	6.0	8.86	3.39	741.	4.7	5.1	31.26	168	112	0	4.0

Appendix 25. Data for diameter distributions in Harakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N305	008	1977	12.4	18.23	10.22	741.	19.9	9.0	31.26	168	112	0	4.0
N305	009	1972	3.8	5.37	2.28	741.	1.8	4.0	33.66	0	0	0	4.0
N305	009	1973	5.8	7.99	3.23	741.	3.9	5.1	33.66	0	0	0	4.0
N305	009	1977	14.5	18.88	8.71	741.	21.2	9.0	33.66	0	0	0	4.0
N305	010	1972	4.6	6.36	3.12	741.	2.5	4.0	33.76	168	112	0	4.0
N305	010	1973	6.2	9.45	6.95	741.	5.6	5.1	33.76	168	112	0	4.0
N305	010	1977	14.5	19.20	21.17	741.	22.6	9.0	33.76	168	112	0	4.0
N305	011	1972	4.1	5.97	2.82	741.	2.2	4.0	34.91	0	112	0	4.0
N305	011	1973	6.1	8.64	3.10	741.	4.5	5.1	34.91	0	112	0	4.0
N305	011	1977	15.0	18.53	8.92	741.	20.4	9.0	34.91	0	112	0	4.0
N305	014	1972	4.5	6.92	4.17	741.	3.0	4.0	34.13	0	112	0	4.0
N305	014	1973	6.2	9.00	4.58	741.	5.0	5.1	34.13	0	112	0	4.0
N305	014	1977	13.2	18.98	16.26	741.	21.8	9.0	34.13	0	112	0	4.0
N191	001	1968	13.2	20.33	14.50	444.	14.9	14.0	29.21	69	112	9	14.0
N191	001	1969	14.2	22.33	17.77	444.	18.0	15.1	29.21	69	112	9	14.0
N191	001	1970	15.7	24.13	18.77	444.	20.9	16.0	29.21	69	112	9	14.0
N191	001	1971	16.5	26.23	22.46	444.	24.8	17.0	29.21	69	112	9	14.0
N191	001	1972	17.3	27.60	23.86	444.	27.4	18.0	29.21	69	112	9	14.0
N191	001	1973	18.0	28.76	25.74	444.	29.7	19.1	29.21	69	112	9	14.0
N191	002	1968	15.7	23.39	32.11	494.	22.4	14.0	32.79	69	0	9	14.0
N191	002	1969	17.0	25.28	39.62	494.	26.2	15.1	32.79	69	0	9	14.0
N191	002	1970	17.8	26.86	45.14	494.	29.7	16.0	32.79	69	0	9	14.0
N191	002	1971	18.5	28.40	50.09	494.	33.1	17.0	32.79	69	0	9	14.0
N191	002	1972	19.1	29.58	56.31	494.	36.0	18.0	32.79	69	0	9	14.0
N191	002	1973	19.3	30.66	61.19	494.	38.7	19.1	32.79	69	0	9	14.0
N191	003	1968	12.2	19.50	22.72	593.	18.7	14.0	27.95	208	112	9	14.0
N191	003	1969	14.0	21.59	26.37	593.	22.9	15.1	27.95	208	112	9	14.0
N191	003	1970	15.0	23.64	28.92	593.	27.3	16.0	27.95	208	112	9	14.0
N191	003	1971	15.7	25.47	31.67	593.	31.6	17.0	27.95	208	112	9	14.0
N191	003	1972	16.5	26.75	35.44	593.	34.9	18.0	27.95	208	112	9	14.0
N191	003	1973	17.0	27.80	36.99	593.	37.6	19.1	27.95	208	112	9	14.0
N191	004	1968	16.3	23.08	18.28	617.	26.7	14.0	33.48	139	112	9	14.0
N191	004	1969	17.8	25.12	22.06	617.	31.6	15.1	33.48	139	112	9	14.0
N191	004	1970	18.5	27.10	26.20	617.	36.8	16.0	33.48	139	112	9	14.0
N191	004	1971	18.8	28.60	30.91	617.	41.1	17.0	33.48	139	112	9	14.0
N191	004	1972	19.1	30.20	37.18	617.	45.9	18.0	33.48	139	112	9	14.0
N191	004	1973	19.3	31.20	39.03	617.	49.0	19.1	33.48	139	112	9	14.0
N191	005	1968	19.3	25.71	12.39	420.	22.2	14.0	31.40	69	112	9	14.0
N191	005	1969	21.3	28.28	14.84	420.	26.8	15.1	31.40	69	112	9	14.0
N191	005	1970	23.1	30.28	16.84	420.	30.8	16.0	31.40	69	112	9	14.0
N191	005	1971	23.1	32.06	20.31	420.	34.5	17.0	31.40	69	112	9	14.0
N191	005	1972	27.2	34.29	18.10	395.	37.0	18.0	31.40	69	112	9	14.0
N191	005	1973	28.4	35.76	20.51	395.	40.3	19.1	31.40	69	112	9	14.0
N191	006	1968	17.0	23.36	21.45	519.	23.0	14.0	32.31	69	0	9	14.0
N191	006	1969	18.5	25.33	24.72	519.	27.1	15.1	32.31	69	0	9	14.0
N191	006	1970	19.3	26.69	26.10	519.	30.0	16.0	32.31	69	0	9	14.0
N191	006	1971	20.3	27.93	28.56	519.	32.9	17.0	32.31	69	0	9	14.0
N191	006	1972	20.6	29.62	35.83	420.	30.0	18.0	32.31	69	0	9	14.0
N191	006	1973	21.1	30.72	36.87	420.	32.3	19.1	32.31	69	0	9	14.0
N191	007	1968	16.5	25.30	24.93	543.	28.3	14.0	34.51	139	0	9	14.0
N191	007	1969	17.8	27.27	29.42	543.	32.9	15.1	34.51	139	0	9	14.0
N191	007	1970	18.3	28.81	32.70	543.	36.8	16.0	34.51	139	0	9	14.0
N191	007	1971	18.5	30.10	33.72	543.	40.0	17.0	34.51	139	0	9	14.0

Appendix 25. Data for diameter distributions in Harakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	007	1972	19.1	30.81	41.13	469.	36.4	18.0	34.51	139	0	9	14.0
N191	007	1973	19.3	32.01	47.15	469.	39.4	19.1	34.51	139	0	9	14.0
N191	008	1968	11.7	19.14	23.47	642.	19.6	14.0	29.31	208	112	9	14.0
N191	008	1969	12.7	21.03	26.74	642.	23.6	15.1	29.31	208	112	9	14.0
N191	008	1970	14.5	23.29	32.52	642.	28.9	16.0	29.31	208	112	9	14.0
N191	008	1971	15.7	25.37	39.19	642.	34.4	17.0	29.31	208	112	9	14.0
N191	008	1972	16.8	26.83	45.66	642.	38.5	18.0	29.31	208	112	9	14.0
N191	008	1973	17.5	27.92	49.02	642.	41.7	19.1	29.31	208	112	9	14.0
N191	009	1968	14.0	21.80	15.85	691.	26.6	14.0	32.34	0	0	9	14.0
N191	009	1969	15.0	23.26	17.20	691.	30.3	15.1	32.34	0	0	9	14.0
N191	009	1970	16.0	24.45	18.98	691.	33.5	16.0	32.34	0	0	9	14.0
N191	009	1971	17.0	25.72	21.16	691.	37.0	17.0	32.34	0	0	9	14.0
N191	009	1972	17.5	26.62	22.69	691.	39.7	18.0	32.34	0	0	9	14.0
N191	009	1973	18.0	27.65	25.50	691.	42.9	19.1	32.34	0	0	9	14.0
N191	010	1968	13.0	20.31	14.55	593.	19.8	14.0	30.21	208	0	9	14.0
N191	010	1969	13.7	22.11	17.68	593.	23.5	15.1	30.21	208	0	9	14.0
N191	010	1970	14.0	23.57	21.37	593.	26.8	16.0	30.21	208	0	9	14.0
N191	010	1971	14.0	24.85	26.30	593.	29.9	17.0	30.21	208	0	9	14.0
N191	010	1972	14.0	25.98	30.84	593.	32.8	18.0	30.21	208	0	9	14.0
N191	010	1973	13.7	26.96	35.47	593.	35.4	19.1	30.21	208	0	9	14.0
N191	011	1968	10.7	17.70	21.69	617.	16.2	14.0	28.81	0	112	9	14.0
N191	011	1969	11.2	18.92	25.16	617.	18.5	15.1	28.81	0	112	9	14.0
N191	011	1970	11.9	19.97	28.30	617.	20.7	16.0	28.81	0	112	9	14.0
N191	011	1971	12.4	20.99	31.89	617.	22.8	17.0	28.81	0	112	9	14.0
N191	011	1972	13.0	21.77	38.00	617.	24.7	18.0	28.81	0	112	9	14.0
N191	011	1973	13.5	22.91	40.32	617.	27.3	19.1	28.81	0	112	9	14.0
N191	012	1968	7.6	14.59	15.11	667.	11.9	14.0	25.80	69	112	9	14.0
N191	012	1969	8.1	16.39	18.19	667.	15.0	15.1	25.80	69	112	9	14.0
N191	012	1970	8.4	17.91	20.86	667.	17.8	16.0	25.80	69	112	9	14.0
N191	012	1971	8.9	19.17	21.99	667.	20.4	17.0	25.80	69	112	9	14.0
N191	012	1972	9.1	20.13	24.79	667.	22.5	18.0	25.80	69	112	9	14.0
N191	012	1973	9.4	21.10	27.32	667.	24.7	19.1	25.80	69	112	9	14.0
N191	013	1968	10.9	16.42	10.72	741.	16.3	14.0	27.05	139	0	9	14.0
N191	013	1969	11.7	18.22	12.69	741.	20.0	15.1	27.05	139	0	9	14.0
N191	013	1970	12.2	19.65	15.12	741.	23.3	16.0	27.05	139	0	9	14.0
N191	013	1971	12.7	20.87	17.56	741.	26.3	17.0	27.05	139	0	9	14.0
N191	013	1972	12.7	21.94	20.66	741.	29.2	18.0	27.05	139	0	9	14.0
N191	013	1973	13.0	22.90	23.57	741.	31.8	19.1	27.05	139	0	9	14.0
N191	014	1968	5.8	13.01	11.65	889.	12.6	14.0	24.92	69	0	9	14.0
N191	014	1969	6.1	14.24	13.73	889.	15.1	15.1	24.92	69	0	9	14.0
N191	014	1970	6.1	15.32	16.24	889.	17.5	16.0	24.92	69	0	9	14.0
N191	014	1971	6.4	16.32	18.46	889.	19.8	17.0	24.92	69	0	9	14.0
N191	014	1972	6.6	17.19	20.78	889.	22.0	18.0	24.92	69	0	9	14.0
N191	014	1973	6.6	18.06	23.07	889.	24.3	19.1	24.92	69	0	9	14.0
N191	015	1968	13.7	19.52	16.79	716.	22.3	14.0	31.60	208	112	9	14.0
N191	015	1969	14.7	21.45	21.03	716.	27.0	15.1	31.60	208	112	9	14.0
N191	015	1970	15.7	23.44	26.93	716.	32.4	16.0	31.60	208	112	9	14.0
N191	015	1971	15.7	24.67	31.57	716.	35.9	17.0	31.60	208	112	9	14.0
N191	015	1972	17.8	28.02	34.48	395.	25.4	18.0	31.60	208	112	9	14.0
N191	015	1973	18.3	29.49	38.53	395.	28.1	19.1	31.60	208	112	9	14.0
N191	016	1968	9.9	15.18	12.92	790.	15.1	14.0	28.55	208	0	9	14.0
N191	016	1969	10.4	16.66	15.12	790.	18.1	15.1	28.55	208	0	9	14.0
N191	016	1970	10.9	18.02	17.17	790.	21.2	16.0	28.55	208	0	9	14.0

Appendix 25. Data for diameter distributions in Horokeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	016	1971	10.9	19.32	20.38	790.	24.4	17.0	28.55	208	0	9	14.0
N191	016	1972	10.9	20.44	25.98	765.	26.6	18.0	28.55	208	0	9	14.0
N191	016	1973	10.9	21.43	30.44	765.	29.4	19.1	28.55	208	0	9	14.0
N191	017	1968	9.9	16.80	12.54	988.	22.8	14.0	31.13	208	112	9	14.0
N191	017	1969	10.2	18.32	15.21	988.	27.2	15.1	31.13	208	112	9	14.0
N191	017	1970	10.2	19.89	18.87	988.	32.1	16.0	31.13	208	112	9	14.0
N191	017	1971	10.2	21.47	24.05	988.	37.6	17.0	31.13	208	112	9	14.0
N191	017	1972	10.2	22.75	30.36	889.	38.2	18.0	31.13	208	112	9	14.0
N191	017	1973	10.2	23.76	35.04	889.	41.8	19.1	31.13	208	112	9	14.0
N191	018	1968	8.6	13.61	11.86	840.	13.0	14.0	26.41	139	112	9	14.0
N191	018	1969	9.7	15.41	13.00	840.	16.5	15.1	26.41	139	112	9	14.0
N191	018	1970	10.2	16.94	15.92	840.	19.9	16.0	26.41	139	112	9	14.0
N191	018	1971	10.7	18.44	19.64	840.	23.7	17.0	26.41	139	112	9	14.0
N191	018	1972	10.9	19.49	22.46	840.	26.5	18.0	26.41	139	112	9	14.0
N191	018	1973	11.2	20.42	25.01	840.	29.1	19.1	26.41	139	112	9	14.0
N191	019	1968	10.2	19.51	20.07	617.	19.4	14.0	29.12	139	0	9	14.0
N191	019	1969	11.2	21.58	23.42	617.	23.7	15.1	29.12	139	0	9	14.0
N191	019	1970	11.9	23.25	27.78	617.	27.5	16.0	29.12	139	0	9	14.0
N191	019	1971	12.4	24.77	30.55	617.	31.2	17.0	29.12	139	0	9	14.0
N191	019	1972	13.0	26.06	33.46	617.	34.5	18.0	29.12	139	0	9	14.0
N191	019	1973	13.2	27.14	36.86	617.	37.4	19.1	29.12	139	0	9	14.0
N191	020	1968	8.4	16.43	29.77	840.	19.7	14.0	28.98	139	112	9	14.0
N191	020	1969	9.4	18.31	35.54	840.	24.4	15.1	28.98	139	112	9	14.0
N191	020	1970	9.9	19.94	41.22	840.	28.9	16.0	28.98	139	112	9	14.0
N191	020	1971	10.2	21.39	47.47	840.	33.2	17.0	28.98	139	112	9	14.0
N191	020	1972	10.2	22.51	55.49	815.	35.9	18.0	28.98	139	112	9	14.0
N191	020	1973	10.2	23.48	62.11	815.	39.1	19.1	28.98	139	112	9	14.0
N191	021	1968	13.5	18.78	12.91	790.	22.7	14.0	31.69	0	112	9	14.0
N191	021	1969	14.0	20.16	14.92	790.	26.1	15.1	31.69	0	112	9	14.0
N191	021	1970	14.5	21.37	16.68	790.	29.3	16.0	31.69	0	112	9	14.0
N191	021	1971	14.7	22.51	17.97	790.	32.5	17.0	31.69	0	112	9	14.0
N191	021	1972	15.0	23.69	20.90	790.	36.1	18.0	31.69	0	112	9	14.0
N191	021	1973	15.2	24.71	23.56	790.	39.3	19.1	31.69	0	112	9	14.0
N191	022	1968	8.6	15.11	16.60	938.	18.0	14.0	28.91	69	112	9	14.0
N191	022	1969	9.7	16.80	20.02	938.	22.2	15.1	28.91	69	112	9	14.0
N191	022	1970	10.4	18.28	23.04	938.	26.3	16.0	28.91	69	112	9	14.0
N191	022	1971	11.2	19.62	26.79	938.	30.3	17.0	28.91	69	112	9	14.0
N191	022	1972	11.7	20.69	30.57	938.	33.8	18.0	28.91	69	112	9	14.0
N191	022	1973	12.7	21.65	33.51	938.	37.0	19.1	28.91	69	112	9	14.0
N191	023	1968	13.0	19.98	15.35	667.	21.7	14.0	31.69	0	0	9	14.0
N191	023	1969	13.7	21.41	16.97	667.	24.9	15.1	31.69	0	0	9	14.0
N191	023	1970	14.2	22.46	17.87	667.	27.3	16.0	31.69	0	0	9	14.0
N191	023	1971	15.0	23.59	18.28	667.	30.1	17.0	31.69	0	0	9	14.0
N191	023	1972	15.2	24.68	20.92	593.	29.3	18.0	31.67	0	0	9	14.0
N191	023	1973	15.5	25.78	22.87	593.	32.0	19.1	31.69	0	0	9	14.0
N191	024	1968	11.2	15.63	10.10	889.	17.7	14.0	26.88	69	0	9	14.0
N191	024	1969	11.9	17.09	11.68	889.	21.2	15.1	26.88	69	0	9	14.0
N191	024	1970	12.4	18.31	13.47	889.	24.3	16.0	26.88	69	0	9	14.0
N191	024	1971	13.5	19.40	15.17	889.	27.3	17.0	26.88	69	0	9	14.0
N191	024	1972	14.0	20.41	16.26	889.	30.2	18.0	26.88	69	0	9	14.0
N191	024	1973	14.5	21.36	17.76	889.	33.0	19.1	26.88	69	0	9	14.0
N191	025	1968	12.4	19.74	16.34	593.	18.9	14.0	29.89	208	112	9	14.0
N191	025	1969	13.5	21.66	19.75	593.	22.7	15.1	29.89	208	112	9	14.0

Appendix 25. Data for diameter distributions in Horokeke. (cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	025	1970	14.0	23.46	24.78	593.	26.7	16.0	29.89	208	112	9	14.0
N191	025	1971	14.5	25.08	27.71	593.	30.5	17.0	29.89	208	112	9	14.0
N191	025	1972	19.6	26.20	23.56	420.	23.4	18.0	29.89	208	112	9	14.0
N191	025	1973	20.1	27.57	26.75	420.	25.9	19.1	29.89	208	112	9	14.0
N191	026	1968	9.4	15.70	7.12	790.	15.7	14.0	26.99	139	112	9	14.0
N191	026	1969	9.9	17.06	8.41	790.	18.6	15.1	26.99	139	112	9	14.0
N191	026	1970	10.4	18.41	10.70	790.	21.7	16.0	26.99	139	112	9	14.0
N191	026	1971	10.9	19.51	12.55	790.	24.4	17.0	26.99	139	112	9	14.0
N191	026	1972	11.2	20.30	14.94	790.	26.5	18.0	26.99	139	112	9	14.0
N191	026	1973	11.4	21.25	17.15	790.	29.0	19.1	26.99	139	112	9	14.0
N191	027	1968	9.9	19.42	43.15	741.	24.4	14.0	27.02	139	112	9	14.0
N191	027	1969	10.4	20.81	45.95	741.	27.8	15.1	27.02	139	112	9	14.0
N191	027	1970	10.9	22.34	51.55	741.	31.9	16.0	27.02	139	112	9	14.0
N191	027	1971	11.2	23.50	57.05	741.	35.3	17.0	27.02	139	112	9	14.0
N191	027	1972	11.4	24.45	67.60	667.	34.7	18.0	27.02	139	112	9	14.0
N191	027	1973	11.4	25.47	73.20	667.	37.7	19.1	27.02	139	112	9	14.0
N191	028	1968	9.9	17.20	18.38	617.	15.2	14.0	28.42	208	112	9	14.0
N191	028	1969	10.9	19.19	22.65	617.	18.9	15.1	28.42	208	112	9	14.0
N191	028	1970	11.9	21.34	28.39	617.	23.4	16.0	28.42	208	112	9	14.0
N191	028	1971	13.2	24.35	34.46	568.	27.9	17.0	28.42	208	112	9	14.0
N191	028	1972	14.5	26.27	39.98	568.	32.5	18.0	28.42	208	112	9	14.0
N191	028	1973	15.5	27.73	45.74	568.	36.3	19.1	28.42	208	112	9	14.0
N191	029	1968	8.4	16.22	17.17	790.	17.4	14.0	28.86	208	0	9	14.0
N191	029	1969	9.1	17.75	19.75	790.	20.7	15.1	28.86	208	0	9	14.0
N191	029	1970	10.4	19.05	21.37	790.	23.8	16.0	28.86	208	0	9	14.0
N191	029	1971	10.9	20.09	24.98	790.	26.6	17.0	28.86	208	0	9	14.0
N191	029	1972	11.4	21.20	27.72	790.	29.5	18.0	28.86	208	0	9	14.0
N191	029	1973	11.9	22.17	30.87	790.	32.4	19.1	28.86	208	0	9	14.0
N191	030	1968	16.5	23.70	11.38	642.	28.9	14.0	33.31	208	0	9	14.0
N191	030	1969	17.3	25.72	15.00	642.	34.1	15.1	33.31	208	0	9	14.0
N191	030	1970	17.8	27.31	18.60	642.	38.5	16.0	33.31	208	0	9	14.0
N191	030	1971	18.0	28.79	23.46	642.	42.9	17.0	33.31	208	0	9	14.0
N191	030	1972	18.5	30.00	28.32	642.	46.8	18.0	33.31	208	0	9	14.0
N191	030	1973	18.5	31.07	34.22	642.	50.3	19.1	33.31	208	0	9	14.0
N191	031	1968	13.7	20.91	13.76	642.	22.7	14.0	32.18	208	112	9	14.0
N191	031	1969	14.7	22.68	15.36	642.	26.7	15.1	32.18	208	112	9	14.0
N191	031	1970	15.5	24.56	18.89	642.	31.3	16.0	32.18	208	112	9	14.0
N191	031	1971	16.8	26.02	24.21	642.	35.3	17.0	32.18	208	112	9	14.0
N191	031	1972	17.3	27.97	39.34	370.	23.8	18.0	32.18	208	112	9	14.0
N191	031	1973	18.0	29.59	48.51	370.	26.8	19.1	32.18	208	112	9	14.0
N191	032	1968	11.4	20.17	15.22	617.	20.4	14.0	30.00	0	112	9	14.0
N191	032	1969	11.9	21.47	17.54	617.	23.2	15.1	30.00	0	112	9	14.0
N191	032	1970	12.4	22.75	19.12	617.	26.0	16.0	30.00	0	112	9	14.0
N191	032	1971	12.7	23.91	21.08	617.	28.7	17.0	30.00	0	112	9	14.0
N191	032	1972	13.0	24.90	23.24	617.	31.1	18.0	30.00	0	112	9	14.0
N191	032	1973	13.2	25.85	25.44	617.	33.6	19.1	30.00	0	112	9	14.0
N191	033	1968	11.4	19.21	14.91	716.	21.6	14.0	31.46	208	112	9	14.0
N191	033	1969	12.7	21.18	18.55	716.	26.2	15.1	31.46	208	112	9	14.0
N191	033	1970	14.0	22.90	23.12	716.	30.7	16.0	31.46	208	112	9	14.0
N191	033	1971	15.0	24.37	28.88	716.	35.0	17.0	31.46	208	112	9	14.0
N191	033	1972	15.7	25.99	36.83	593.	33.1	18.0	31.46	208	112	9	14.0
N191	033	1973	16.3	27.07	41.46	593.	36.0	19.1	31.46	208	112	9	14.0
N191	034	1968	6.1	16.38	27.68	815.	18.9	14.0	30.68	0	112	9	14.0

Appendix 25. Data for diameter distributions in Harakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	034	1969	6.9	17.78	32.67	815.	22.3	15.1	30.68	0	112	9	14.0
N191	034	1970	7.6	18.99	38.25	815.	25.5	16.0	30.68	0	112	9	14.0
N191	034	1971	8.4	20.01	42.76	815.	28.3	17.0	30.68	0	112	9	14.0
N191	034	1972	8.6	21.16	47.25	790.	30.6	18.0	30.68	0	112	9	14.0
N191	034	1973	9.1	22.03	52.42	790.	33.3	19.1	30.68	0	112	9	14.0
N191	035	1968	8.9	17.79	9.37	716.	18.3	14.0	30.63	139	0	9	14.0
N191	035	1969	9.1	19.05	10.76	716.	21.0	15.1	30.63	139	0	9	14.0
N191	035	1970	9.4	20.44	12.50	716.	24.2	16.0	30.63	139	0	9	14.0
N191	035	1971	15.2	21.96	9.66	667.	25.7	17.0	30.63	139	0	9	14.0
N191	035	1972	16.0	22.90	11.24	617.	26.0	18.0	30.63	139	0	9	14.0
N191	035	1973	16.5	24.02	12.77	617.	28.6	19.1	30.63	139	0	9	14.0
N191	036	1968	11.9	18.41	21.05	691.	19.5	14.0	31.58	0	0	9	14.0
N191	036	1969	12.7	19.81	23.71	691.	22.5	15.1	31.58	0	0	9	14.0
N191	036	1970	13.0	20.71	26.43	691.	24.7	16.0	31.58	0	0	9	14.0
N191	036	1971	13.2	21.67	29.56	691.	27.1	17.0	31.58	0	0	9	14.0
N191	036	1972	13.7	22.60	32.94	691.	29.5	18.0	31.58	0	0	9	14.0
N191	036	1973	14.2	23.45	37.38	691.	31.8	19.1	31.58	0	0	9	14.0
N191	037	1968	10.2	18.71	23.41	765.	22.4	14.0	30.11	0	0	9	14.0
N191	037	1969	10.7	19.97	26.58	765.	25.5	15.1	30.11	0	0	9	14.0
N191	037	1970	10.7	20.96	30.27	765.	28.2	16.0	30.11	0	0	9	14.0
N191	037	1971	10.7	21.86	33.38	765.	30.7	17.0	30.11	0	0	9	14.0
N191	037	1972	10.7	23.00	34.07	741.	32.7	18.0	30.11	0	0	9	14.0
N191	037	1973	10.7	23.80	37.26	741.	35.0	19.1	30.11	0	0	9	14.0
N191	038	1968	12.7	21.19	19.24	617.	22.7	14.0	30.42	139	112	9	14.0
N191	038	1969	14.2	22.93	22.44	617.	26.5	15.1	30.42	139	112	9	14.0
N191	038	1970	14.7	24.59	26.09	617.	30.5	16.0	30.42	139	112	9	14.0
N191	038	1971	15.2	25.99	30.93	617.	34.2	17.0	30.42	139	112	9	14.0
N191	038	1972	15.2	27.05	36.27	593.	35.7	18.0	30.42	139	112	9	14.0
N191	038	1973	15.2	28.16	41.59	593.	38.8	19.1	30.42	139	112	9	14.0
N191	039	1968	13.7	22.05	23.93	642.	25.7	14.0	31.82	69	0	9	14.0
N191	039	1969	15.5	23.86	26.07	642.	30.0	15.1	31.82	69	0	9	14.0
N191	039	1970	16.8	25.35	28.79	642.	33.8	16.0	31.82	69	0	9	14.0
N191	039	1971	18.3	26.66	30.76	642.	37.3	17.0	31.82	69	0	9	14.0
N191	039	1972	18.3	27.63	34.12	642.	40.1	18.0	31.82	69	0	9	14.0
N191	039	1973	19.3	28.80	37.29	642.	43.6	19.1	31.82	69	0	9	14.0
N191	040	1968	9.7	18.81	20.31	765.	22.5	14.0	31.53	139	0	9	14.0
N191	040	1969	10.4	20.42	23.54	765.	26.4	15.1	31.53	139	0	9	14.0
N191	040	1970	11.2	21.80	26.97	765.	30.1	16.0	31.53	139	0	9	14.0
N191	040	1971	11.4	23.02	30.48	765.	33.6	17.0	31.53	139	0	9	14.0
N191	040	1972	11.7	24.07	34.65	765.	36.8	18.0	31.53	139	0	9	14.0
N191	040	1973	11.9	25.22	39.05	765.	40.5	19.1	31.53	139	0	9	14.0
N191	041	1968	10.2	19.16	22.87	716.	21.9	14.0	27.88	69	112	9	14.0
N191	041	1969	10.9	20.78	26.29	716.	25.7	15.1	27.88	69	112	9	14.0
N191	041	1970	11.7	22.26	28.86	716.	29.4	16.0	27.88	69	112	9	14.0
N191	041	1971	12.2	23.49	31.46	716.	32.7	17.0	27.88	69	112	9	14.0
N191	041	1972	12.4	24.62	35.12	716.	36.0	18.0	27.88	69	112	9	14.0
N191	041	1973	12.7	25.77	39.35	716.	39.5	19.1	27.88	69	112	9	14.0
N191	042	1968	11.9	17.31	12.05	716.	17.5	14.0	28.44	0	0	9	14.0
N191	042	1969	12.4	18.76	14.85	716.	20.6	15.1	28.44	0	0	9	14.0
N191	042	1970	13.2	19.90	16.86	716.	23.2	16.0	28.44	0	0	9	14.0
N191	042	1971	13.7	21.01	19.22	716.	25.9	17.0	28.44	0	0	9	14.0
N191	042	1972	14.0	22.10	22.71	716.	28.7	18.0	28.44	0	0	9	14.0
N191	042	1973	14.5	23.11	24.95	716.	31.4	19.1	28.44	0	0	9	14.0

Appendix 25. Data for diameter distributions in Harakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	043	1968	6.4	14.27	16.63	815.	14.1	14.0	25.99	0	0	9	14.0
N191	043	1969	6.9	15.58	20.68	815.	16.8	15.1	25.99	0	0	9	14.0
N191	043	1970	7.1	16.66	23.66	815.	19.2	16.0	25.99	0	0	9	14.0
N191	043	1971	7.6	17.68	26.92	815.	21.7	17.0	25.99	0	0	9	14.0
N191	043	1972	8.4	18.77	30.40	815.	24.4	18.0	25.99	0	0	9	14.0
N191	043	1973	9.1	19.75	34.56	815.	27.1	19.1	25.99	0	0	9	14.0
N191	044	1968	10.2	14.14	6.91	716.	11.6	14.0	27.06	0	112	9	14.0
N191	044	1969	10.9	15.44	8.39	716.	13.9	15.1	27.06	0	112	9	14.0
N191	044	1970	11.9	16.73	10.41	716.	16.3	16.0	27.06	0	112	9	14.0
N191	044	1971	13.2	18.17	12.88	716.	19.3	17.0	27.06	0	112	9	14.0
N191	044	1972	13.7	19.37	15.78	716.	22.0	18.0	27.06	0	112	9	14.0
N191	044	1973	13.7	20.49	18.23	716.	24.6	19.1	27.06	0	112	9	14.0
N191	045	1968	10.2	18.25	14.68	642.	17.5	14.0	27.62	69	0	9	14.0
N191	045	1969	11.4	19.73	16.25	642.	20.4	15.1	27.62	69	0	9	14.0
N191	045	1970	11.9	21.07	18.06	642.	23.3	16.0	27.62	69	0	9	14.0
N191	045	1971	12.2	22.21	20.65	642.	25.9	17.0	27.62	69	0	9	14.0
N191	045	1972	12.7	23.40	23.21	617.	27.6	18.0	27.62	69	0	9	14.0
N191	045	1973	13.0	24.49	26.10	617.	30.3	19.1	27.62	69	0	9	14.0
N191	046	1968	11.2	18.04	17.28	617.	16.6	14.0	28.64	69	112	9	14.0
N191	046	1969	12.7	19.90	19.35	617.	20.1	15.1	28.64	69	112	9	14.0
N191	046	1970	14.0	21.18	21.11	617.	22.7	16.0	28.64	69	112	9	14.0
N191	046	1971	14.5	22.50	23.99	617.	25.7	17.0	28.64	69	112	9	14.0
N191	046	1972	14.7	23.44	27.62	617.	27.9	18.0	28.64	69	112	9	14.0
N191	046	1973	14.7	24.46	31.02	617.	30.4	19.1	28.64	69	112	9	14.0
N191	047	1968	7.1	14.88	15.68	889.	16.5	14.0	28.49	139	0	9	14.0
N191	047	1969	7.6	16.18	17.45	889.	19.5	15.1	28.49	139	0	9	14.0
N191	047	1970	7.9	17.16	18.78	889.	21.8	16.0	28.49	139	0	9	14.0
N191	047	1971	8.4	18.13	20.34	889.	24.3	17.0	28.49	139	0	9	14.0
N191	047	1972	8.6	19.01	22.34	864.	26.0	18.0	28.49	139	0	9	14.0
N191	047	1973	8.6	19.84	25.65	864.	28.4	19.1	28.49	139	0	9	14.0
N191	048	1968	8.9	14.14	12.03	889.	14.8	14.0	26.44	208	112	9	14.0
N191	048	1969	10.2	15.74	13.72	889.	18.2	15.1	26.44	208	112	9	14.0
N191	048	1970	11.7	17.50	16.08	889.	22.5	16.0	26.44	208	112	9	14.0
N191	048	1971	13.0	19.22	18.85	889.	27.1	17.0	26.44	208	112	9	14.0
N191	048	1972	14.0	20.24	20.77	889.	30.0	18.0	26.44	208	112	9	14.0
N191	048	1973	14.7	21.33	23.73	889.	33.4	19.1	26.44	208	112	9	14.0
N191	049	1968	9.7	15.23	10.35	716.	13.6	14.0	25.40	208	0	9	14.0
N191	049	1969	10.9	16.89	11.67	716.	16.7	15.1	25.40	208	0	9	14.0
N191	049	1970	11.4	18.28	13.64	716.	19.5	16.0	25.40	208	0	9	14.0
N191	049	1971	12.4	19.52	15.20	716.	22.2	17.0	25.40	208	0	9	14.0
N191	049	1972	13.2	20.64	16.98	716.	24.9	18.0	25.40	208	0	9	14.0
N191	049	1973	14.0	21.75	19.14	716.	27.6	19.1	25.40	208	0	9	14.0
N191	050	1968	11.9	16.86	8.41	815.	18.7	14.0	27.49	208	112	9	14.0
N191	050	1969	13.2	18.92	10.50	815.	23.5	15.1	27.49	208	112	9	14.0
N191	050	1970	15.5	20.90	12.27	815.	28.7	16.0	27.49	208	112	9	14.0
N191	050	1971	17.0	22.84	14.95	815.	34.3	17.0	27.49	208	112	9	14.0
N191	050	1972	18.3	24.28	16.25	815.	38.7	18.0	27.49	208	112	9	14.0
N191	050	1973	19.3	25.57	17.14	815.	42.9	19.1	27.49	208	112	9	14.0
N191	051	1968	10.4	18.35	15.56	815.	22.5	14.0	27.40	208	112	9	14.0
N191	051	1969	11.2	20.12	19.34	815.	27.1	15.1	27.40	208	112	9	14.0
N191	051	1970	12.2	21.82	23.69	815.	31.9	16.0	27.40	208	112	9	14.0
N191	051	1971	12.7	23.47	28.65	815.	37.0	17.0	27.40	208	112	9	14.0
N191	051	1972	13.5	25.09	30.47	765.	39.6	18.0	27.40	208	112	9	14.0

Appendix 25. Data for diameter distributions in Horakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N191	051	1973	13.7	26.27	35.28	741.	42.1	19.1	27.40	208	112	9	14.0
N191	052	1968	10.4	21.46	28.66	667.	25.5	14.0	31.25	0	112	9	14.0
N191	052	1969	11.2	23.17	32.96	667.	29.8	15.1	31.25	0	112	9	14.0
N191	052	1970	11.9	24.52	36.15	667.	33.3	16.0	31.25	0	112	9	14.0
N191	052	1971	12.4	25.79	39.58	667.	36.8	17.0	31.25	0	112	9	14.0
N191	052	1972	13.0	27.16	44.70	642.	39.4	18.0	31.25	0	112	9	14.0
N191	052	1973	13.5	28.39	49.33	642.	43.0	19.1	31.25	0	112	9	14.0
N191	053	1968	9.9	16.51	13.94	741.	16.6	14.0	30.00	208	0	9	14.0
N191	053	1969	10.4	17.68	15.89	741.	19.1	15.1	30.00	208	0	9	14.0
N191	053	1970	10.7	18.73	18.26	741.	21.4	16.0	30.00	208	0	9	14.0
N191	053	1971	10.9	19.59	20.53	741.	23.5	17.0	30.00	208	0	9	14.0
N191	053	1972	11.4	20.51	22.90	716.	24.9	18.0	30.00	208	0	9	14.0
N191	053	1973	11.7	21.39	25.49	716.	27.1	19.1	30.00	208	0	9	14.0
N191	054	1968	12.2	22.05	32.68	494.	20.1	14.0	31.99	208	112	9	14.0
N191	054	1969	14.2	24.70	40.81	494.	25.2	15.1	31.99	208	112	9	14.0
N191	054	1970	15.7	27.14	44.94	494.	30.2	16.0	31.99	208	112	9	14.0
N191	054	1971	17.0	29.44	50.98	494.	35.5	17.0	31.99	208	112	9	14.0
N191	054	1972	18.0	30.94	54.83	494.	39.2	18.0	31.99	208	112	9	14.0
N191	054	1973	18.8	32.33	57.33	494.	42.7	19.1	31.99	208	112	9	14.0
N435	001	1975	5.8	9.04	3.69	543.	3.6	7.1	28.87	100	25	10	7.1
N435	001	1976	8.6	11.91	5.40	543.	6.3	8.1	28.87	100	25	10	7.1
N435	001	1977	10.5	14.42	7.41	543.	9.2	9.1	28.87	100	25	10	7.1
N435	001	1979	12.5	17.03	10.70	519.	12.2	10.8	28.87	100	25	10	7.1
N435	002	1975	4.7	8.95	4.97	543.	3.6	7.1	26.00	100	75	10	7.1
N435	002	1976	8.7	12.46	5.58	543.	6.8	8.1	26.00	100	75	10	7.1
N435	002	1977	11.0	15.33	7.10	543.	10.3	9.1	26.00	100	75	10	7.1
N435	002	1979	13.8	18.45	8.42	543.	14.9	10.8	26.00	100	75	10	7.1
N435	003	1975	3.8	9.47	6.03	543.	4.1	7.1	26.65	100	75	10	7.1
N435	003	1976	6.0	12.55	7.25	543.	7.0	8.1	26.65	100	75	10	7.1
N435	003	1977	7.8	15.09	9.44	543.	10.1	9.1	26.65	100	75	10	7.1
N435	003	1979	9.2	17.82	12.34	543.	14.1	10.8	26.65	100	75	10	7.1
N435	004	1975	3.0	7.07	8.54	543.	2.5	7.1	26.86	100	25	10	7.1
N435	004	1976	4.0	9.74	12.75	543.	4.6	8.1	26.86	100	25	10	7.1
N435	004	1977	5.4	11.98	18.31	494.	6.2	9.1	26.86	100	25	10	7.1
N435	004	1979	7.1	14.63	23.81	494.	9.2	10.8	26.86	100	25	10	7.1
N435	005	1975	4.5	7.99	5.19	543.	2.9	7.1	27.27	0	0	10	7.1
N435	005	1976	6.0	9.99	7.10	543.	4.5	8.1	27.27	0	0	10	7.1
N435	005	1977	7.5	12.16	8.84	543.	6.7	9.1	27.27	0	0	10	7.1
N435	005	1979	9.9	14.95	11.02	543.	10.0	10.8	27.27	0	0	10	7.1
N435	006	1975	5.5	8.83	4.31	543.	3.5	7.1	26.43	100	25	10	7.1
N435	006	1976	8.3	11.86	7.00	543.	6.3	8.1	26.43	100	25	10	7.1
N435	006	1977	10.7	14.43	9.22	543.	9.3	9.1	26.43	100	25	10	7.1
N435	006	1979	13.8	17.52	11.12	543.	13.5	10.8	26.43	100	25	10	7.1
N435	007	1975	5.2	9.30	5.18	543.	3.9	7.1	27.07	100	50	10	7.1
N435	007	1976	7.0	12.51	8.03	543.	7.0	8.1	27.07	100	50	10	7.1
N435	007	1977	8.3	15.05	12.01	543.	10.1	9.1	27.07	100	50	10	7.1
N435	007	1979	9.8	17.90	15.03	543.	14.3	10.8	27.07	100	50	10	7.1
N435	008	1975	4.0	6.42	2.52	543.	1.9	7.1	25.11	100	75	10	7.1
N435	008	1976	5.4	8.90	3.40	543.	3.5	8.1	25.11	100	75	10	7.1
N435	008	1977	6.6	10.82	4.50	543.	5.2	9.1	25.11	100	75	10	7.1
N435	008	1979	8.1	13.01	6.36	543.	7.5	10.8	25.11	100	75	10	7.1
N435	009	1975	5.8	10.29	4.09	543.	4.7	7.1	30.00	0	0	10	7.1
N435	009	1976	6.8	12.66	5.93	543.	7.1	8.1	30.00	0	0	10	7.1

Appendix 25. Data for diameter distributions in Harakeke.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N435	009	1977	8.0	15.06	7.90	543.	10.0	9.1	30.00	0	0	10	7.1
N435	009	1979	13.5	18.64	7.66	519.	14.4	10.8	30.00	0	0	10	7.1
N435	010	1975	4.5	7.93	4.16	543.	2.9	7.1	26.65	100	50	10	7.1
N435	010	1976	5.8	10.53	5.99	543.	5.0	8.1	26.65	100	50	10	7.1
N435	010	1977	7.3	12.71	8.27	543.	7.2	9.1	26.65	100	50	10	7.1
N435	010	1979	9.2	15.55	10.50	543.	10.7	10.8	26.65	100	50	10	7.1
N435	011	1975	3.8	6.25	3.12	543.	1.8	7.1	22.99	0	0	10	7.1
N435	011	1976	4.7	7.62	4.13	543.	2.6	8.1	22.99	0	0	10	7.1
N435	011	1977	5.8	8.97	5.56	543.	3.7	9.1	22.99	0	0	10	7.1
N435	011	1979	6.6	10.61	7.69	543.	5.1	10.8	22.99	0	0	10	7.1
N435	012	1975	5.0	8.18	4.09	543.	3.0	7.1	28.09	100	50	10	7.1
N435	012	1976	7.5	10.86	5.55	543.	5.3	8.1	28.09	100	50	10	7.1
N435	012	1977	9.0	13.10	8.05	543.	7.6	9.1	28.09	100	50	10	7.1
N435	012	1979	10.7	15.15	9.99	543.	10.2	10.8	28.09	100	50	10	7.1

Appendix 26. Stand growth data for Rabbit Island.

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N434	001	1976	500	9.7	8.0	13.8	500	14.2	9.0	15.9	34.12	8.0	300	0	0
N434	001	1977	500	9.7	8.0	13.8	500	19.4	10.0	17.3	34.12	8.0	300	0	0
N434	001	1978	500	9.7	8.0	13.8	500	23.8	11.0	19.2	34.12	8.0	300	0	0
N434	001	1979	500	9.7	8.0	13.8	500	27.4	12.0	20.5	34.12	8.0	300	0	0
N434	001	1980	244	15.5	12.0	20.5	244	19.4	13.0	22.6	34.12	12.0	300	0	0
N434	001	1981	244	15.5	12.0	20.5	244	23.1	14.0	23.0	34.12	12.0	300	0	0
N434	003	1976	500	9.7	8.0	13.8	500	13.9	9.0	16.9	34.24	8.0	200	0	0
N434	003	1977	500	9.7	8.0	13.8	500	19.2	10.0	18.3	34.24	8.0	200	0	0
N434	003	1978	500	9.7	8.0	13.8	500	23.1	11.0	19.5	34.24	8.0	200	0	0
N434	003	1979	500	9.7	8.0	13.8	500	26.3	12.0	20.5	34.24	8.0	200	0	0
N434	003	1980	256	15.0	12.0	20.5	256	18.7	13.0	22.7	34.24	12.0	200	0	0
N434	003	1981	256	15.0	12.0	20.5	256	22.5	14.0	23.7	34.24	12.0	200	0	0
N434	004	1976	500	9.8	8.0	13.8	500	12.3	9.0	15.4	32.93	0.0	0	0	0
N434	004	1977	500	9.8	8.0	13.8	500	15.0	10.0	17.1	32.93	0.0	0	0	0
N434	004	1978	500	9.8	8.0	13.8	500	17.7	11.0	18.1	32.93	0.0	0	0	0
N434	004	1979	500	9.8	8.0	13.8	500	20.5	12.0	19.2	32.93	0.0	0	0	0
N434	004	1980	244	11.5	12.0	19.2	244	14.1	13.0	21.5	32.93	0.0	0	0	0
N434	004	1981	244	11.5	12.0	19.2	244	16.6	14.0	22.3	32.93	0.0	0	0	0
N434	005	1976	500	9.6	8.0	14.9	500	13.1	9.0	16.7	35.58	8.0	100	0	0
N434	005	1977	500	9.6	8.0	14.9	500	17.1	10.0	18.2	35.58	8.0	100	0	0
N434	005	1978	500	9.6	8.0	14.9	500	20.6	11.0	19.5	35.58	8.0	100	0	0
N434	005	1979	500	9.6	8.0	14.9	500	23.8	12.0	20.9	35.58	8.0	100	0	0
N434	005	1980	256	13.5	12.0	20.9	256	16.9	13.0	22.7	35.58	12.0	100	0	0
N434	005	1981	256	13.5	12.0	20.9	256	20.3	14.0	23.9	35.58	12.0	100	0	0
N434	006	1976	500	9.7	8.0	14.5	500	12.2	9.0	15.8	34.10	0.0	0	0	0
N434	006	1977	500	9.7	8.0	14.5	500	15.1	10.0	17.8	34.10	0.0	0	0	0
N434	006	1978	500	9.7	8.0	14.5	500	18.0	11.0	19.2	34.10	0.0	0	0	0
N434	006	1979	500	9.7	8.0	14.5	500	21.0	12.0	21.2	34.10	0.0	0	0	0
N434	006	1980	256	11.7	12.0	21.2	256	14.2	13.0	23.0	34.10	0.0	0	0	0
N434	006	1981	256	11.7	12.0	21.2	256	16.4	14.0	23.7	34.10	0.0	0	0	0
N434	008	1976	500	9.7	8.0	13.7	500	14.1	9.0	16.2	34.08	8.0	300	0	0
N434	008	1977	500	9.7	8.0	13.7	500	18.2	10.0	17.7	34.08	8.0	300	0	0
N434	008	1978	500	9.7	8.0	13.7	500	22.1	11.0	19.3	34.08	8.0	300	0	0
N434	008	1979	500	9.7	8.0	13.7	500	25.2	12.0	21.7	34.08	8.0	300	0	0
N434	008	1980	256	14.3	12.0	21.5	256	17.6	13.0	23.5	34.08	12.0	300	0	0
N434	008	1981	256	14.3	12.0	21.5	256	21.2	14.0	24.7	34.08	12.0	300	0	0
N434	009	1976	500	9.4	8.0	15.5	500	12.9	9.0	17.0	36.34	8.0	100	0	0
N434	009	1977	500	9.4	8.0	15.5	500	16.5	10.0	17.9	36.34	8.0	100	0	0
N434	009	1978	500	9.4	8.0	15.5	500	19.9	11.0	19.5	36.34	8.0	100	0	0
N434	009	1979	500	9.4	8.0	15.5	500	23.2	12.0	20.7	36.34	8.0	100	0	0
N434	009	1980	244	13.3	12.0	20.7	244	16.2	13.0	22.5	36.34	12.0	100	0	0
N434	009	1981	244	13.3	12.0	20.7	244	19.0	14.0	23.8	36.34	12.0	100	0	0
N434	010	1976	500	9.2	8.0	14.5	500	12.2	9.0	16.9	34.23	0.0	0	0	0
N434	010	1977	500	9.2	8.0	14.5	500	14.5	10.0	17.7	34.23	0.0	0	0	0
N434	010	1978	500	9.2	8.0	14.5	500	17.3	11.0	19.5	34.23	0.0	0	0	0
N434	010	1979	500	9.2	8.0	14.5	500	19.9	12.0	21.2	34.23	0.0	0	0	0
N434	010	1980	244	11.4	12.0	21.1	244	13.5	13.0	22.2	34.23	0.0	0	0	0
N434	010	1981	244	11.4	12.0	21.1	244	15.3	14.0	23.4	34.23	0.0	0	0	0
N434	011	1976	500	9.3	8.0	15.2	500	13.0	9.0	16.2	36.01	8.0	200	0	0
N434	011	1977	500	9.3	8.0	15.2	500	17.0	10.0	17.6	36.01	8.0	200	0	0
N434	011	1978	500	9.3	8.0	15.2	500	20.7	11.0	20.3	36.01	8.0	200	0	0
N434	011	1979	500	9.3	8.0	15.2	500	23.8	12.0	21.2	36.01	8.0	200	0	0
N434	011	1980	244	13.6	12.0	21.2	244	16.7	13.0	23.0	36.01	12.0	200	0	0

Appendix 26. Stand growth data for Rabbit Island.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N434	011	1981	244	13.6	12.0	21.2	244	16.7	14.0	24.1	36.01	12.0	200	0	0
N434	013	1976	500	9.7	8.0	14.4	500	13.9	9.0	16.8	34.98	8.0	300	0	0
N434	013	1977	500	9.7	8.0	14.4	500	18.6	10.0	18.1	34.98	8.0	300	0	0
N434	013	1978	500	9.7	8.0	14.4	500	22.3	11.0	19.7	34.98	8.0	300	0	0
N434	013	1979	500	9.7	8.0	14.4	500	25.9	12.0	21.0	34.98	8.0	300	0	0
N434	013	1980	244	15.0	12.0	21.0	244	18.6	13.0	23.1	34.98	12.0	300	0	0
N434	013	1981	244	15.0	12.0	21.0	244	22.5	14.0	24.5	34.98	12.0	300	0	0
N434	014	1976	500	9.8	8.0	14.7	500	14.0	9.0	16.4	35.37	8.0	200	0	0
N434	014	1977	500	9.8	8.0	14.7	500	18.6	10.0	18.1	35.37	8.0	200	0	0
N434	014	1978	500	9.8	8.0	14.7	500	22.3	11.0	19.4	35.37	8.0	200	0	0
N434	014	1979	500	9.8	8.0	14.7	500	26.1	12.0	20.2	35.37	8.0	200	0	0
N434	014	1980	256	15.0	12.0	20.2	256	18.4	13.0	22.3	35.37	12.0	200	0	0
N434	014	1981	256	15.0	12.0	20.2	256	22.1	14.0	23.4	35.37	12.0	200	0	0
N434	015	1976	500	9.7	8.0	14.5	500	13.4	9.0	17.0	35.11	8.0	100	0	0
N434	015	1977	500	9.7	8.0	14.5	500	17.1	10.0	18.4	35.11	8.0	100	0	0
N434	015	1978	500	9.7	8.0	14.5	500	20.4	11.0	20.0	35.11	8.0	100	0	0
N434	015	1979	500	9.7	8.0	14.5	500	23.4	12.0	20.8	35.11	8.0	100	0	0
N434	015	1980	244	13.7	12.0	20.8	244	16.6	13.0	22.8	35.11	12.0	100	0	0
N434	015	1981	244	13.7	12.0	20.8	244	19.4	14.0	23.6	25.11	12.0	100	0	0
N461	269	1969	385	77.8	32.5	43.9	385	83.8	35.3	45.0	31.91	0.0	0	0	0
N461	269	1972	385	83.8	35.3	45.0	385	89.9	39.6	46.3	31.91	0.0	0	0	0
N461	369	1969	346	57.3	33.5	40.0	346	61.5	36.3	42.3	27.11	0.0	0	0	0
N461	469	1969	420	44.0	20.5	27.0	395	50.2	23.3	31.2	25.99	0.0	0	0	0
N461	469	1972	395	50.2	23.3	31.2	346	51.5	27.6	34.6	25.99	0.0	0	0	0
N461	469	1976	346	51.5	27.6	34.6	346	58.8	31.2	37.3	25.99	0.0	0	0	0
N461	469	1980	346	58.8	31.2	37.3	346	62.5	33.1	37.7	25.99	0.0	0	0	0
N461	569	1969	395	53.5	33.5	39.4	395	57.1	36.3	41.4	28.21	0.0	0	0	0
N461	569	1972	395	57.1	36.3	41.4	395	63.2	40.6	45.6	28.21	0.0	0	0	0
N461	569	1976	395	63.2	40.6	45.6	395	67.2	44.1	47.9	28.21	0.0	0	0	0
N461	669	1969	168	51.0	36.5	41.0	168	54.5	39.3	42.5	25.60	0.0	0	0	0
N461	172	1972	1235	5.9	5.6	7.2	1235	17.4	8.6	12.5	28.35	0.0	0	0	0
N461	172	1980	593	25.2	13.2	17.4	593	31.9	15.1	20.9	28.35	0.0	0	0	0
N461	272	1972	765	2.8	4.6	5.0	765	17.4	8.6	13.3	30.49	0.0	0	0	0
N461	272	1976	765	17.4	8.6	13.3	741	36.7	12.2	18.5	30.49	0.0	0	0	0
N461	372	1972	1728	28.3	9.6	14.7	1679	46.6	13.6	22.3	30.65	0.0	0	0	0
N461	372	1976	272	23.2	17.2	25.7	272	28.7	19.1	28.6	30.65	0.0	0	0	0
N461	472	1972	1481	26.0	8.6	14.2	1481	41.1	12.6	20.2	31.30	0.0	0	0	0
N461	472	1980	272	15.5	16.2	24.8	247	17.9	18.1	27.8	31.30	0.0	0	0	0
N461	572	1972	1210	3.3	5.6	6.8	1210	19.8	9.6	13.8	29.72	0.0	0	0	0
N461	572	1980	840	25.6	13.1	19.1	790	31.2	15.1	23.1	29.72	0.0	0	0	0
N461	672	1972	691	10.1	7.6	11.6	691	25.3	11.6	18.5	32.28	0.0	0	0	0
N461	672	1980	494	29.5	15.1	25.7	469	35.8	17.1	28.6	32.28	0.0	0	0	0
N461	772	1980	642	26.3	14.2	22.5	642	32.6	16.1	25.1	30.58	0.0	0	0	0
N461	176	1976	474	31.4	19.6	28.8	435	39.2	23.1	33.6	29.88	0.0	0	0	0
N461	176	1980	435	39.2	23.1	33.6	435	42.9	25.1	36.3	29.88	0.0	0	0	0
N461	276	1976	217	28.6	20.6	32.1	217	35.0	24.1	35.8	30.94	0.0	0	0	0
N461	276	1980	217	35.0	24.1	35.8	217	38.1	26.1	37.3	30.94	0.0	0	0	0
N461	376	1976	138	7.3	14.6	24.1	138	12.3	18.2	28.2	30.76	0.0	0	0	0
N461	376	1980	138	12.3	18.2	28.2	138	14.0	20.1	29.7	30.76	0.0	0	0	0
N461	476	1976	217	30.1	20.6	33.7	217	37.7	24.1	37.9	33.07	0.0	0	0	0
N461	476	1980	217	37.7	24.1	37.9	217	41.1	26.1	39.6	33.07	0.0	0	0	0
N461	576	1976	168	5.8	14.6	23.0	168	10.6	18.2	26.8	29.77	0.0	0	0	0
N461	576	1980	168	10.6	18.2	26.8	168	12.7	20.1	29.3	29.77	0.0	0	0	0

Appendix 26. Stand growth data for Rabbit Island.
(cont.)

			t1				t2								
REF.	PLT	YEAR	N	G	A	H	N	G	A	H	S	Af	Nf	Pf	Bf
N461	180	1980	750	18.1	9.2	16.2	750	25.6	11.1	20.2	34.36	0.0	0	0	0
N461	280	1980	550	22.5	12.2	20.9	550	28.4	14.1	23.6	32.73	0.0	0	0	0
N547	001	1979	338	22.1	15.8	26.4	338	27.1	17.0	26.6	31.60	0.0	0	0	0
N547	001	1980	338	27.1	17.0	26.6	338	30.6	18.1	29.1	31.60	0.0	0	0	0
N547	001	1981	338	30.6	18.1	29.1	338	33.4	19.0	30.2	31.60	0.0	0	0	0
N547	002	1980	304	21.7	17.0	20.6	304	24.3	18.1	26.3	27.51	0.0	0	0	0
N547	002	1981	304	24.3	18.1	26.3	304	26.2	19.0	27.8	27.51	0.0	0	0	0

Appendix 27. Sectional measurement data for Rabbit Island. (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	001	001	1976	20.0	22.4	0.00	18.8	15.50
N434	001	001	1976	18.7	20.6	0.70	18.8	15.50
N434	001	001	1976	17.4	18.8	1.40	18.8	15.50
N434	001	001	1976	11.5	12.1	7.68	18.8	15.50
N434	001	001	1976	10.6	11.2	8.27	18.8	15.50
N434	001	001	1976	9.9	10.5	8.80	18.8	15.50
N434	001	001	1976	9.0	9.6	9.30	18.8	15.50
N434	001	001	1976	8.0	8.6	10.06	18.8	15.50
N434	001	001	1976	7.2	7.7	10.60	18.8	15.50
N434	001	001	1976	5.1	5.5	12.61	18.8	15.50
N434	001	001	1976	4.4	4.6	13.55	18.8	15.50
N434	001	002	1976	13.9	15.9	0.00	13.5	14.65
N434	001	002	1976	12.3	13.5	1.40	13.5	14.65
N434	001	002	1976	11.5	12.1	2.87	13.5	14.65
N434	001	002	1976	10.8	11.2	4.12	13.5	14.65
N434	001	002	1976	9.6	10.1	6.45	13.5	14.65
N434	001	002	1976	8.6	9.1	7.50	13.5	14.65
N434	001	002	1976	7.5	8.0	8.89	13.5	14.65
N434	001	002	1976	5.8	6.2	10.78	13.5	14.65
N434	001	002	1976	4.7	5.1	11.55	13.5	14.65
N434	001	002	1976	3.7	3.9	12.95	13.5	14.65
N434	001	003	1976	16.1	18.1	0.70	16.0	15.53
N434	001	003	1976	14.8	16.0	1.40	16.0	15.53
N434	001	003	1976	13.5	14.2	2.75	16.0	15.53
N434	001	003	1976	12.4	13.0	4.65	16.0	15.53
N434	001	003	1976	10.8	11.4	6.85	16.0	15.53
N434	001	003	1976	9.7	10.3	7.90	16.0	15.53
N434	001	003	1976	8.8	9.2	9.08	16.0	15.53
N434	001	003	1976	7.8	8.2	10.09	16.0	15.53
N434	001	003	1976	6.8	7.2	11.07	16.0	15.53
N434	001	003	1976	5.7	6.1	12.02	16.0	15.53
N434	001	004	1976	14.2	16.0	0.00	13.0	14.00
N434	001	004	1976	12.0	13.0	1.40	13.0	14.00
N434	001	004	1976	11.4	12.0	3.64	13.0	14.00
N434	001	004	1976	10.4	11.0	5.24	13.0	14.00
N434	001	004	1976	9.5	10.0	6.51	13.0	14.00
N434	001	004	1976	8.4	8.8	8.20	13.0	14.00
N434	001	004	1976	7.2	7.6	9.32	13.0	14.00
N434	001	004	1976	6.0	6.4	10.40	13.0	14.00
N434	001	004	1976	3.7	3.9	12.40	13.0	14.00
N434	001	005	1976	12.9	14.9	0.00	13.5	12.25
N434	001	005	1976	12.7	14.2	0.70	13.5	12.25
N434	001	005	1976	12.5	13.5	1.40	13.5	12.25
N434	001	005	1976	11.9	12.5	2.91	13.5	12.25
N434	001	005	1976	11.0	11.6	4.29	13.5	12.25
N434	001	005	1976	7.8	8.4	7.34	13.5	12.25
N434	001	005	1976	6.4	7.0	7.90	13.5	12.25
N434	001	005	1976	5.6	6.0	8.97	13.5	12.25
N434	001	005	1976	4.1	4.5	10.25	13.5	12.25
N434	001	006	1976	19.8	22.8	0.00	19.6	14.35
N434	001	006	1976	18.8	21.2	0.70	19.6	14.35
N434	001	006	1976	16.0	17.1	2.96	19.6	14.35

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	001	006	1976	15.0	15.8	4.12	19.6	14.35
N434	001	006	1976	12.8	13.5	6.30	19.6	14.35
N434	001	006	1976	11.7	12.3	7.16	19.6	14.35
N434	001	006	1976	10.4	11.0	8.27	19.6	14.35
N434	001	006	1976	7.1	7.7	10.22	19.6	14.35
N434	001	006	1976	6.4	6.8	10.82	19.6	14.35
N434	001	006	1976	4.9	5.3	11.86	19.6	14.35
N434	001	007	1976	16.0	17.2	0.70	16.1	14.50
N434	001	007	1976	14.0	14.6	3.20	16.1	14.50
N434	001	007	1976	11.4	12.0	6.66	16.1	14.50
N434	001	007	1976	10.4	10.9	7.80	16.1	14.50
N434	001	007	1976	9.5	10.1	8.70	16.1	14.50
N434	001	007	1976	8.5	9.0	9.25	16.1	14.50
N434	001	007	1976	7.6	8.1	10.37	16.1	14.50
N434	001	007	1976	7.0	7.4	10.79	16.1	14.50
N434	001	007	1976	6.0	6.4	11.29	16.1	14.50
N434	001	007	1976	4.8	5.2	12.20	16.1	14.50
N434	001	007	1976	3.8	4.0	12.80	16.1	14.50
N434	001	008	1976	17.9	19.7	0.70	19.4	15.55
N434	001	008	1976	18.0	19.4	1.40	19.4	15.55
N434	001	008	1976	16.2	17.0	2.95	19.4	15.55
N434	001	008	1976	14.5	15.2	4.83	19.4	15.55
N434	001	008	1976	12.6	13.2	7.05	19.4	15.55
N434	001	008	1976	11.1	11.7	8.50	19.4	15.55
N434	001	008	1976	8.7	9.3	10.25	19.4	15.55
N434	001	008	1976	7.4	7.8	11.15	19.4	15.55
N434	001	008	1976	6.4	6.8	12.00	19.4	15.55
N434	001	008	1976	4.3	4.5	13.46	19.4	15.55
N434	001	009	1976	17.5	20.1	0.00	19.1	15.23
N434	001	009	1976	17.6	19.6	0.70	19.1	15.23
N434	001	009	1976	15.5	16.5	2.60	19.1	15.23
N434	001	009	1976	14.2	14.8	3.82	19.1	15.23
N434	001	009	1976	13.0	13.6	5.00	19.1	15.23
N434	001	009	1976	10.5	11.1	8.10	19.1	15.23
N434	001	009	1976	9.9	10.5	9.15	19.1	15.23
N434	001	009	1976	8.6	9.2	9.80	19.1	15.23
N434	001	009	1976	7.5	8.1	10.76	19.1	15.23
N434	001	009	1976	6.9	7.3	11.45	19.1	15.23
N434	001	009	1976	6.0	6.4	12.23	19.1	15.23
N434	001	010	1976	19.5	22.0	0.00	19.0	14.90
N434	001	010	1976	18.6	20.5	0.70	19.0	14.90
N434	001	010	1976	17.7	19.0	1.40	19.0	14.90
N434	001	010	1976	15.5	16.3	3.15	19.0	14.90
N434	001	010	1976	13.7	14.3	5.10	19.0	14.90
N434	001	010	1976	12.9	13.5	6.05	19.0	14.90
N434	001	010	1976	11.9	12.5	7.04	19.0	14.90
N434	001	010	1976	10.6	11.2	8.03	19.0	14.90
N434	001	010	1976	9.6	10.2	9.16	19.0	14.90
N434	001	010	1976	8.6	9.2	9.70	19.0	14.90
N434	001	010	1976	7.5	8.1	10.53	19.0	14.90
N434	001	011	1976	13.8	15.0	0.70	13.5	13.28
N434	001	011	1976	12.7	13.5	1.40	13.5	13.28

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	001	011	1976	11.9	12.5	2.66	13.5	13.28
N434	001	011	1976	11.0	11.6	4.25	13.5	13.28
N434	001	011	1976	10.1	10.7	5.35	13.5	13.28
N434	001	011	1976	8.8	9.3	6.85	13.5	13.28
N434	001	011	1976	7.0	7.5	8.93	13.5	13.28
N434	001	011	1976	5.9	6.4	9.80	13.5	13.28
N434	001	011	1976	4.7	4.9	10.75	13.5	13.28
N434	001	012	1976	18.5	19.7	1.40	19.7	12.05
N434	001	012	1976	16.2	17.0	2.90	19.7	12.05
N434	001	012	1976	14.4	15.1	3.95	19.7	12.05
N434	001	012	1976	11.8	12.5	5.20	19.7	12.05
N434	001	012	1976	10.6	11.2	5.98	19.7	12.05
N434	001	012	1976	9.6	10.2	7.09	19.7	12.05
N434	001	012	1976	7.8	8.2	7.85	19.7	12.05
N434	001	012	1976	5.6	6.0	8.35	19.7	12.05
N434	001	012	1976	5.1	5.5	9.42	19.7	12.05
N434	001	012	1976	4.6	4.8	9.85	19.7	12.05
N434	002	001	1976	18.8	21.2	0.00	18.8	15.96
N434	002	001	1976	18.2	20.0	0.70	18.8	15.96
N434	002	001	1976	17.6	18.8	1.40	18.8	15.96
N434	002	001	1976	15.2	16.0	3.15	18.8	15.96
N434	002	001	1976	13.5	14.3	5.08	18.8	15.96
N434	002	001	1976	12.3	13.0	6.75	18.8	15.96
N434	002	001	1976	10.0	10.6	8.90	18.8	15.96
N434	002	001	1976	9.1	9.7	9.85	18.8	15.96
N434	002	001	1976	7.7	8.3	10.70	18.8	15.96
N434	002	001	1976	6.4	7.0	12.12	18.8	15.96
N434	002	002	1976	13.2	15.2	0.00	12.8	12.84
N434	002	002	1976	12.6	14.0	0.70	12.8	12.84
N434	002	002	1976	12.0	12.8	1.40	12.8	12.84
N434	002	002	1976	10.7	11.3	2.65	12.8	12.84
N434	002	002	1976	9.8	10.2	3.75	12.8	12.84
N434	002	002	1976	9.0	9.4	5.55	12.8	12.84
N434	002	002	1976	6.6	7.0	8.73	12.8	12.84
N434	002	002	1976	4.8	5.0	10.55	12.8	12.84
N434	002	003	1976	13.5	14.7	0.70	13.5	14.05
N434	002	003	1976	12.7	13.5	1.40	13.5	14.05
N434	002	003	1976	12.0	12.6	2.80	13.5	14.05
N434	002	003	1976	10.0	10.5	5.95	13.5	14.05
N434	002	003	1976	8.8	9.2	7.29	13.5	14.05
N434	002	003	1976	7.6	8.0	8.82	13.5	14.05
N434	002	003	1976	6.7	7.1	9.74	13.5	14.05
N434	002	003	1976	5.6	6.0	10.72	13.5	14.05
N434	002	003	1976	4.4	4.6	11.05	13.5	14.05
N434	002	004	1976	12.8	14.0	0.70	13.1	15.06
N434	002	004	1976	12.5	13.1	1.40	13.1	15.06
N434	002	004	1976	11.4	11.9	2.48	13.1	15.06
N434	002	004	1976	10.6	11.0	4.20	13.1	15.06
N434	002	004	1976	8.6	9.0	6.64	13.1	15.06
N434	002	004	1976	7.4	7.8	8.20	13.1	15.06
N434	002	004	1976	6.3	6.7	9.40	13.1	15.06
N434	002	004	1976	5.2	5.6	10.32	13.1	15.06

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	002	004	1976	4.2	4.4	11.07	13.1	15.06
N434	002	005	1976	18.8	22.2	0.00	16.4	13.75
N434	002	005	1976	17.0	19.3	0.70	16.4	13.75
N434	002	005	1976	15.2	16.4	1.40	16.4	13.75
N434	002	005	1976	13.3	13.9	4.15	16.4	13.75
N434	002	005	1976	12.3	12.9	5.45	16.4	13.75
N434	002	005	1976	11.2	11.8	6.75	16.4	13.75
N434	002	005	1976	9.7	10.3	7.77	16.4	13.75
N434	002	005	1976	7.3	7.9	9.50	16.4	13.75
N434	002	005	1976	6.6	7.1	10.45	16.4	13.75
N434	002	005	1976	5.8	6.3	10.90	16.4	13.75
N434	002	006	1976	12.6	14.4	0.00	13.0	12.10
N434	002	006	1976	12.5	13.7	0.70	13.0	12.10
N434	002	006	1976	12.4	13.0	1.40	13.0	12.10
N434	002	006	1976	11.3	11.9	1.78	13.0	12.10
N434	002	006	1976	10.5	11.0	2.40	13.0	12.10
N434	002	006	1976	9.0	9.4	5.17	13.0	12.10
N434	002	006	1976	8.2	8.6	6.25	13.0	12.10
N434	002	006	1976	6.3	6.7	8.63	13.0	12.10
N434	002	006	1976	5.1	5.5	9.70	13.0	12.10
N434	002	006	1976	4.0	4.2	10.50	13.0	12.10
N434	002	007	1976	18.3	21.3	0.00	18.1	14.12
N434	002	007	1976	17.5	19.7	0.70	18.1	14.12
N434	002	007	1976	13.5	14.1	4.40	18.1	14.12
N434	002	007	1976	12.5	13.1	5.55	18.1	14.12
N434	002	007	1976	11.8	12.4	6.82	18.1	14.12
N434	002	007	1976	10.7	11.3	7.75	18.1	14.12
N434	002	007	1976	9.7	10.3	8.71	18.1	14.12
N434	002	007	1976	8.4	9.0	9.35	18.1	14.12
N434	002	007	1976	6.8	7.2	9.80	18.1	14.12
N434	002	007	1976	4.9	5.1	12.08	18.1	14.12
N434	002	008	1976	18.7	21.9	0.00	18.1	14.20
N434	002	008	1976	16.9	18.1	1.40	18.1	14.20
N434	002	008	1976	15.2	16.1	2.80	18.1	14.20
N434	002	008	1976	13.5	14.3	4.62	18.1	14.20
N434	002	008	1976	12.2	13.0	6.00	18.1	14.20
N434	002	008	1976	9.2	9.8	8.16	18.1	14.20
N434	002	008	1976	8.1	8.7	8.72	18.1	14.20
N434	002	008	1976	7.3	7.7	9.53	18.1	14.20
N434	002	008	1976	6.1	6.5	10.03	18.1	14.20
N434	002	008	1976	5.5	5.9	10.95	18.1	14.20
N434	002	008	1976	4.1	4.3	11.80	18.1	14.20
N434	002	009	1976	18.6	22.1	0.00	18.9	15.33
N434	002	009	1976	18.3	20.5	0.70	18.9	15.33
N434	002	009	1976	18.0	18.9	1.40	18.9	15.33
N434	002	009	1976	13.6	14.2	6.50	18.9	15.33
N434	002	009	1976	12.2	12.8	7.79	18.9	15.33
N434	002	009	1976	9.2	9.8	10.45	18.9	15.33
N434	002	009	1976	8.4	8.9	10.88	18.9	15.33
N434	002	009	1976	7.3	7.8	11.52	18.9	15.33
N434	002	009	1976	6.3	6.7	12.05	18.9	15.33
N434	002	009	1976	4.8	5.2	13.06	18.9	15.33

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	002	010	1976	20.2	23.0	0.00	19.2	15.25
N434	002	010	1976	18.0	19.2	1.40	19.2	15.25
N434	002	010	1976	14.1	14.9	5.80	19.2	15.25
N434	002	010	1976	12.2	13.0	7.70	19.2	15.25
N434	002	010	1976	11.2	11.9	8.70	19.2	15.25
N434	002	010	1976	9.8	10.6	9.55	19.2	15.25
N434	002	010	1976	8.7	9.3	10.35	19.2	15.25
N434	002	010	1976	6.5	7.1	11.90	19.2	15.25
N434	002	010	1976	5.9	6.3	12.48	19.2	15.25
N434	002	010	1976	4.4	4.6	13.48	19.2	15.25
N434	002	011	1976	19.7	22.1	0.00	19.9	16.40
N434	002	011	1976	19.2	21.0	0.70	19.9	16.40
N434	002	011	1976	18.7	19.9	1.40	19.9	16.40
N434	002	011	1976	17.0	18.0	2.60	19.9	16.40
N434	002	011	1976	13.5	14.1	6.24	19.9	16.40
N434	002	011	1976	10.8	11.4	9.15	19.9	16.40
N434	002	011	1976	9.5	10.1	10.14	19.9	16.40
N434	002	011	1976	8.6	9.0	10.85	19.9	16.40
N434	002	011	1976	7.5	7.9	11.77	19.9	16.40
N434	002	011	1976	5.8	6.2	12.95	19.9	16.40
N434	002	011	1976	4.6	5.0	14.10	19.9	16.40
N434	002	012	1976	15.8	18.0	0.00	16.4	12.68
N434	002	012	1976	15.7	17.2	0.70	16.4	12.68
N434	002	012	1976	15.6	16.4	1.40	16.4	12.68
N434	002	012	1976	13.7	14.3	3.00	16.4	12.68
N434	002	012	1976	12.0	12.6	4.20	16.4	12.68
N434	002	012	1976	10.8	11.4	6.08	16.4	12.68
N434	002	012	1976	8.6	9.2	8.15	16.4	12.68
N434	002	012	1976	6.5	6.9	9.47	16.4	12.68
N434	002	012	1976	5.5	5.9	10.40	16.4	12.68
N434	002	012	1976	4.3	4.7	10.90	16.4	12.68
N434	003	001	1976	16.9	20.1	0.00	16.3	14.25
N434	003	001	1976	16.0	18.2	0.70	16.3	14.25
N434	003	001	1976	15.1	16.3	1.40	16.3	14.25
N434	003	001	1976	11.0	11.6	6.26	16.3	14.25
N434	003	001	1976	10.0	10.6	6.98	16.3	14.25
N434	003	001	1976	9.1	9.7	8.05	16.3	14.25
N434	003	001	1976	7.9	8.5	8.95	16.3	14.25
N434	003	001	1976	7.1	7.6	9.40	16.3	14.25
N434	003	001	1976	6.2	6.6	10.70	16.3	14.25
N434	003	001	1976	4.9	5.3	11.35	16.3	14.25
N434	003	002	1976	18.5	20.5	0.70	19.2	15.52
N434	003	002	1976	18.0	19.2	1.40	19.2	15.52
N434	003	002	1976	16.5	17.3	3.00	19.2	15.52
N434	003	002	1976	14.3	15.1	4.85	19.2	15.52
N434	003	002	1976	12.8	13.6	6.67	19.2	15.52
N434	003	002	1976	10.9	11.5	8.26	19.2	15.52
N434	003	002	1976	8.7	9.3	10.03	19.2	15.52
N434	003	002	1976	7.7	8.3	10.75	19.2	15.52
N434	003	002	1976	7.1	7.7	11.56	19.2	15.52
N434	003	002	1976	5.8	6.2	12.45	19.2	15.52
N434	003	002	1976	4.7	5.1	13.54	19.2	15.52

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	003	003	1976	18.2	20.6	0.00	19.4	15.45
N434	003	003	1976	18.2	20.0	0.70	19.4	15.45
N434	003	003	1976	18.2	19.4	1.40	19.4	15.45
N434	003	003	1976	16.7	17.5	2.20	19.4	15.45
N434	003	003	1976	14.8	15.5	3.94	19.4	15.45
N434	003	003	1976	11.9	12.5	7.12	19.4	15.45
N434	003	003	1976	10.6	11.2	8.60	19.4	15.45
N434	003	003	1976	9.9	10.5	9.25	19.4	15.45
N434	003	003	1976	8.0	8.4	10.58	19.4	15.45
N434	003	003	1976	7.1	7.5	11.49	19.4	15.45
N434	003	003	1976	4.7	5.1	13.03	19.4	15.45
N434	003	004	1976	14.4	16.8	0.00	15.6	14.55
N434	003	004	1976	14.4	16.2	0.70	15.6	14.55
N434	003	004	1976	14.4	15.6	1.40	15.6	14.55
N434	003	004	1976	12.6	13.4	2.47	15.6	14.55
N434	003	004	1976	12.0	12.6	3.46	15.6	14.55
N434	003	004	1976	11.1	11.6	4.95	15.6	14.55
N434	003	004	1976	10.3	10.8	6.17	15.6	14.55
N434	003	004	1976	9.6	10.0	7.18	15.6	14.55
N434	003	004	1976	8.5	8.9	8.55	15.6	14.55
N434	003	004	1976	7.4	7.8	9.80	15.6	14.55
N434	003	005	1976	19.1	22.2	0.00	18.6	14.00
N434	003	005	1976	18.2	20.4	0.70	18.6	14.00
N434	003	005	1976	17.3	18.6	1.40	18.6	14.00
N434	003	005	1976	15.2	16.1	2.77	18.6	14.00
N434	003	005	1976	12.5	13.1	6.00	18.6	14.00
N434	003	005	1976	11.4	12.0	6.95	18.6	14.00
N434	003	005	1976	10.3	10.9	7.95	18.6	14.00
N434	003	005	1976	9.3	9.9	8.85	18.6	14.00
N434	003	005	1976	8.2	8.8	9.35	18.6	14.00
N434	003	005	1976	6.5	6.9	10.14	18.6	14.00
N434	003	005	1976	4.1	4.3	11.60	18.6	14.00
N434	003	006	1976	20.7	23.5	0.00	19.5	14.50
N434	003	006	1976	19.5	21.5	0.70	19.5	14.50
N434	003	006	1976	18.3	19.5	1.40	19.5	14.50
N434	003	006	1976	16.6	17.3	2.76	19.5	14.50
N434	003	006	1976	14.7	15.3	5.60	19.5	14.50
N434	003	006	1976	12.4	13.0	7.32	19.5	14.50
N434	003	006	1976	11.2	11.8	8.80	19.5	14.50
N434	003	006	1976	9.2	9.8	9.50	19.5	14.50
N434	003	006	1976	4.7	4.9	11.53	19.5	14.50
N434	003	007	1976	12.9	13.9	0.00	12.3	11.95
N434	003	007	1976	12.3	13.1	0.70	12.3	11.95
N434	003	007	1976	11.7	12.3	1.40	12.3	11.95
N434	003	007	1976	11.0	11.4	2.30	12.3	11.95
N434	003	007	1976	10.1	10.5	3.32	12.3	11.95
N434	003	007	1976	9.0	9.4	5.35	12.3	11.95
N434	003	007	1976	7.1	7.5	7.85	12.3	11.95
N434	003	007	1976	5.9	6.3	8.93	12.3	11.95
N434	003	008	1976	18.7	21.5	0.00	19.5	15.43
N434	003	008	1976	18.5	20.5	0.70	19.5	15.43
N434	003	008	1976	18.3	19.5	1.40	19.5	15.43

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	003	008	1976	14.3	14.9	4.80	19.5	15.43
N434	003	008	1976	11.2	11.8	7.90	19.5	15.43
N434	003	008	1976	10.1	10.6	8.70	19.5	15.43
N434	003	008	1976	9.0	9.5	9.73	19.5	15.43
N434	003	008	1976	8.1	8.6	10.29	19.5	15.43
N434	003	008	1976	7.2	7.6	11.33	19.5	15.43
N434	003	008	1976	6.3	6.7	11.70	19.5	15.43
N434	003	008	1976	4.4	4.8	13.40	19.5	15.43
N434	003	009	1976	13.9	15.7	0.00	13.1	13.28
N434	003	009	1976	12.5	13.1	1.40	13.1	13.28
N434	003	009	1976	11.5	12.1	2.37	13.1	13.28
N434	003	009	1976	10.4	11.0	4.20	13.1	13.28
N434	003	009	1976	9.6	10.0	5.85	13.1	13.28
N434	003	009	1976	8.8	9.2	7.33	13.1	13.28
N434	003	009	1976	7.5	7.9	8.41	13.1	13.28
N434	003	009	1976	5.7	6.1	10.03	13.1	13.28
N434	003	009	1976	4.6	5.0	10.98	13.1	13.28
N434	003	010	1976	12.0	15.0	0.00	13.0	13.62
N434	003	010	1976	12.0	14.0	0.70	13.0	13.62
N434	003	010	1976	12.0	13.0	1.40	13.0	13.62
N434	003	010	1976	11.2	11.9	2.43	13.0	13.62
N434	003	010	1976	10.2	10.6	4.08	13.0	13.62
N434	003	010	1976	8.3	8.7	7.06	13.0	13.62
N434	003	010	1976	7.0	7.4	8.80	13.0	13.62
N434	003	010	1976	4.8	5.0	10.95	13.0	13.62
N434	003	011	1976	13.5	15.4	0.00	13.0	13.55
N434	003	011	1976	12.9	14.2	0.70	13.0	13.55
N434	003	011	1976	11.6	12.0	2.40	13.0	13.55
N434	003	011	1976	10.7	11.1	3.90	13.0	13.55
N434	003	011	1976	9.6	10.0	5.84	13.0	13.55
N434	003	011	1976	8.6	9.0	7.03	13.0	13.55
N434	003	011	1976	7.7	8.1	8.22	13.0	13.55
N434	003	011	1976	4.9	5.3	10.75	13.0	13.55
N434	003	012	1976	18.9	21.3	0.00	19.7	15.55
N434	003	012	1976	18.7	20.5	0.70	19.7	15.55
N434	003	012	1976	16.5	17.2	2.83	19.7	15.55
N434	003	012	1976	14.2	14.8	5.23	19.7	15.55
N434	003	012	1976	13.1	13.7	6.97	19.7	15.55
N434	003	012	1976	11.4	12.0	8.27	19.7	15.55
N434	003	012	1976	10.5	11.1	9.43	19.7	15.55
N434	003	012	1976	9.3	9.9	9.90	19.7	15.55
N434	003	012	1976	8.3	8.9	10.60	19.7	15.55
N434	003	012	1976	6.4	7.0	12.03	19.7	15.55
N434	003	012	1976	5.5	5.9	12.56	19.7	15.55
N434	001	001	1980	20.4	22.2	1.40	22.2	19.00
N434	001	001	1980	18.2	19.6	2.78	22.2	19.00
N434	001	001	1980	16.1	17.5	5.93	22.2	19.00
N434	001	001	1980	13.4	14.4	10.36	22.2	19.00
N434	001	001	1980	11.2	12.2	12.19	22.2	19.00
N434	001	001	1980	8.7	9.3	14.12	22.2	19.00
N434	001	001	1980	6.6	7.2	16.10	22.2	19.00
N434	001	013	1980	26.5	29.5	0.70	27.4	25.30

Appendix 27. Sectional measurement data for Robbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	001	013	1980	24.8	27.4	1.40	27.4	25.30
N434	001	013	1980	20.6	22.2	6.88	27.4	25.30
N434	001	013	1980	16.3	17.3	11.35	27.4	25.30
N434	001	013	1980	11.4	12.4	14.59	27.4	25.30
N434	001	013	1980	6.8	7.4	18.18	27.4	25.30
N434	001	023	1980	26.6	31.4	0.00	27.8	19.90
N434	001	023	1980	25.6	29.6	0.70	27.8	19.90
N434	001	023	1980	24.6	27.8	1.40	27.8	19.90
N434	001	023	1980	21.1	22.9	3.32	27.8	19.90
N434	001	023	1980	11.6	12.8	13.23	27.8	19.90
N434	001	023	1980	7.2	7.8	15.95	27.8	19.90
N434	001	012	1980	24.6	29.0	0.00	25.0	20.38
N434	001	012	1980	23.4	27.0	0.70	25.0	20.38
N434	001	012	1980	22.2	25.0	1.40	25.0	20.38
N434	001	012	1980	14.1	15.3	11.25	25.0	20.38
N434	001	012	1980	9.3	10.1	14.54	25.0	20.38
N434	001	012	1980	4.6	5.2	18.40	25.0	20.38
N434	001	035	1980	22.7	27.3	0.00	20.5	17.43
N434	001	035	1980	20.9	23.9	0.70	20.5	17.43
N434	001	035	1980	19.1	20.5	1.40	20.5	17.43
N434	001	035	1980	14.3	15.5	6.59	20.5	17.43
N434	001	035	1980	11.9	12.9	8.95	20.5	17.43
N434	001	035	1980	7.2	8.0	13.59	20.5	17.43
N434	001	035	1980	5.1	5.5	15.32	20.5	17.43
N434	003	016	1980	28.4	32.3	0.00	28.5	20.71
N434	003	016	1980	26.8	30.4	0.70	28.5	20.71
N434	003	016	1980	22.2	23.8	3.57	28.5	20.71
N434	003	016	1980	17.5	18.5	9.72	28.5	20.71
N434	003	016	1980	12.5	13.5	13.45	28.5	20.71
N434	003	016	1980	7.5	8.3	16.70	28.5	20.71
N434	003	044	1980	22.1	26.3	0.00	21.7	18.23
N434	003	044	1980	20.4	24.0	0.70	21.7	18.23
N434	003	044	1980	18.7	21.7	1.40	21.7	18.23
N434	003	044	1980	15.7	16.7	6.13	21.7	18.23
N434	003	044	1980	10.5	11.5	10.83	21.7	18.23
N434	003	044	1980	8.3	9.1	13.17	21.7	18.23
N434	003	044	1980	5.7	6.5	15.08	21.7	18.23
N434	003	029	1980	23.8	27.1	0.00	23.7	19.88
N434	003	029	1980	22.4	25.4	0.70	23.7	19.88
N434	003	029	1980	19.0	21.0	2.60	23.7	19.88
N434	003	029	1980	17.3	18.5	6.13	23.7	19.88
N434	003	029	1980	15.0	16.0	9.43	23.7	19.88
N434	003	029	1980	12.6	13.6	11.65	23.7	19.88
N434	003	029	1980	10.4	11.2	13.58	23.7	19.88
N434	003	029	1980	8.1	8.9	14.80	23.7	19.88
N434	003	032	1980	25.8	31.7	0.00	27.7	20.18
N434	003	032	1980	24.7	27.7	1.40	27.7	20.18
N434	003	032	1980	20.9	22.9	3.15	27.7	20.18
N434	003	032	1980	16.0	17.4	9.87	27.7	20.18
N434	003	032	1980	11.9	12.9	13.75	27.7	20.18
N434	003	032	1980	6.7	7.5	17.38	27.7	20.18
N434	003	025	1980	20.6	24.5	0.00	21.5	18.15

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	003	025	1980	19.4	23.0	0.70	21.5	18.15
N434	003	025	1980	18.2	21.5	1.40	21.5	18.15
N434	003	025	1980	15.1	16.5	6.18	21.5	18.15
N434	003	025	1980	10.0	11.4	11.92	21.5	18.15
N434	003	025	1980	7.7	8.7	13.72	21.5	18.15
N434	003	025	1980	5.7	6.7	15.07	21.5	18.15
N434	004	040	1980	17.5	21.1	0.70	19.6	17.70
N434	004	040	1980	16.4	19.6	1.40	19.6	17.70
N434	004	040	1980	15.4	17.0	4.00	19.6	17.70
N434	004	040	1980	11.1	12.3	9.79	19.6	17.70
N434	004	040	1980	8.9	9.9	12.30	19.6	17.70
N434	004	040	1980	6.2	7.0	14.30	19.6	17.70
N434	004	030	1980	24.2	27.8	0.70	25.6	22.20
N434	004	030	1980	22.7	25.6	1.40	25.6	22.20
N434	004	030	1980	18.7	20.3	6.55	25.6	22.20
N434	004	030	1980	13.8	15.4	12.38	25.6	22.20
N434	004	030	1980	9.0	10.2	16.66	25.6	22.20
N434	004	030	1980	4.6	5.8	19.52	25.6	22.20
N434	004	027	1980	26.6	30.3	0.00	26.1	19.80
N434	004	027	1980	25.1	28.2	0.70	26.1	19.80
N434	004	027	1980	23.5	26.1	1.40	26.1	19.80
N434	004	027	1980	19.4	21.0	6.09	26.1	19.80
N434	004	027	1980	15.0	16.4	11.20	26.1	19.80
N434	004	027	1980	5.2	6.2	17.35	26.1	19.80
N434	004	026	1980	23.4	28.7	0.00	23.3	20.30
N434	004	026	1980	20.3	23.3	1.40	23.3	20.30
N434	004	026	1980	19.4	20.8	3.50	23.3	20.30
N434	004	026	1980	14.6	16.0	9.45	23.3	20.30
N434	004	026	1980	11.8	13.0	13.40	23.3	20.30
N434	004	026	1980	9.7	10.9	14.70	23.3	20.30
N434	004	026	1980	7.1	8.1	16.58	23.3	20.30
N434	004	026	1980	4.8	5.8	18.10	23.3	20.30
N434	004	037	1980	15.8	20.2	0.00	19.4	17.80
N434	004	037	1980	16.1	19.4	1.40	19.4	17.80
N434	004	037	1980	13.0	14.0	4.80	19.4	17.80
N434	004	037	1980	11.2	12.0	7.78	19.4	17.80
N434	004	037	1980	8.9	9.7	11.46	19.4	17.80
N434	004	037	1980	6.2	7.0	13.54	19.4	17.80
N434	005	020	1980	22.2	26.6	0.00	23.8	21.21
N434	005	020	1980	21.3	25.2	0.70	23.8	21.21
N434	005	020	1980	20.4	23.8	1.40	23.8	21.21
N434	005	020	1980	19.1	21.5	2.31	23.8	21.21
N434	005	020	1980	17.7	18.7	5.90	23.8	21.21
N434	005	020	1980	15.4	16.4	8.35	23.8	21.21
N434	005	020	1980	13.0	13.8	11.02	23.8	21.21
N434	005	020	1980	8.0	8.8	15.80	23.8	21.21
N434	005	012	1980	25.6	30.2	0.00	26.0	19.60
N434	005	012	1980	24.1	28.1	0.70	26.0	19.60
N434	005	012	1980	22.6	26.0	1.40	26.0	19.60
N434	005	012	1980	19.2	21.0	3.29	26.0	19.60
N434	005	012	1980	14.8	16.0	8.93	26.0	19.60
N434	005	012	1980	5.5	6.1	16.64	26.0	19.60

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	005	032	1980	23.7	28.4	0.00	26.2	21.02
N434	005	032	1980	23.3	27.3	0.70	26.2	21.02
N434	005	032	1980	22.9	26.2	1.40	26.2	21.02
N434	005	032	1980	20.0	21.4	3.53	26.2	21.02
N434	005	032	1980	10.6	11.2	15.05	26.2	21.02
N434	005	032	1980	5.5	6.1	18.45	26.2	21.02
N434	005	029	1980	20.6	25.6	0.00	21.0	19.05
N434	005	029	1980	20.1	23.3	0.70	21.0	19.05
N434	005	029	1980	19.6	21.0	1.40	21.0	19.05
N434	005	029	1980	17.3	18.3	3.84	21.0	19.05
N434	005	029	1980	15.1	16.1	6.58	21.0	19.05
N434	005	029	1980	10.0	11.0	12.50	21.0	19.05
N434	005	029	1980	7.9	8.7	14.73	21.0	19.05
N434	005	040	1980	21.3	25.3	0.00	21.5	19.68
N434	005	040	1980	20.4	23.4	0.70	21.5	19.68
N434	005	040	1980	15.5	16.5	5.79	21.5	19.68
N434	005	040	1980	13.3	14.3	8.87	21.5	19.68
N434	005	040	1980	10.6	11.4	11.80	21.5	19.68
N434	005	040	1980	8.3	8.9	14.20	21.5	19.68
N434	005	040	1980	6.6	7.2	15.53	21.5	19.68
N434	006	038	1980	20.0	23.4	0.70	20.5	20.30
N434	006	038	1980	18.5	20.5	1.40	20.5	20.30
N434	006	038	1980	17.0	18.0	3.90	20.5	20.30
N434	006	038	1980	12.2	13.2	11.12	20.5	20.30
N434	006	038	1980	9.8	10.8	14.45	20.5	20.30
N434	006	038	1980	7.5	8.3	16.09	20.5	20.30
N434	006	038	1980	4.5	5.3	18.15	20.5	20.30
N434	006	010	1980	21.0	25.8	0.00	22.0	19.80
N434	006	010	1980	19.9	23.9	0.70	22.0	19.80
N434	006	010	1980	18.8	22.0	1.40	22.0	19.80
N434	006	010	1980	15.8	17.0	5.28	22.0	19.80
N434	006	010	1980	13.2	14.4	9.20	22.0	19.80
N434	006	010	1980	11.0	12.2	12.43	22.0	19.80
N434	006	010	1980	5.9	6.9	16.80	22.0	19.80
N434	006	005	1980	18.5	22.4	0.00	20.8	18.40
N434	006	005	1980	18.1	21.6	0.70	20.8	18.40
N434	006	005	1980	17.7	20.8	1.40	20.8	18.40
N434	006	005	1980	17.1	18.3	2.67	20.8	18.40
N434	006	005	1980	12.6	13.6	8.10	20.8	18.40
N434	006	005	1980	9.4	10.4	12.10	20.8	18.40
N434	006	005	1980	4.5	5.5	16.10	20.8	18.40
N434	006	022	1980	22.2	26.1	0.00	24.3	19.95
N434	006	022	1980	21.7	25.2	0.70	24.3	19.95
N434	006	022	1980	21.3	24.3	1.40	24.3	19.95
N434	006	022	1980	16.3	17.5	7.93	24.3	19.95
N434	006	022	1980	11.5	12.5	12.63	24.3	19.95
N434	006	022	1980	8.7	9.5	15.13	24.3	19.95
N434	006	022	1980	6.2	7.0	16.90	24.3	19.95
N434	006	042	1980	22.4	26.1	0.70	24.5	20.70
N434	006	042	1980	20.4	22.0	3.40	24.5	20.70
N434	006	042	1980	18.5	19.5	5.50	24.5	20.70
N434	006	042	1980	16.2	17.2	8.37	24.5	20.70

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	006	042	1980	13.5	14.5	11.30	24.5	20.70
N434	006	042	1980	11.1	12.1	13.18	24.5	20.70
N434	006	042	1980	8.4	9.4	15.40	24.5	20.70
N434	006	042	1980	5.8	6.8	17.20	24.5	20.70
N434	008	044	1980	26.6	30.4	0.00	25.4	22.64
N434	008	044	1980	24.4	27.9	0.70	25.4	22.64
N434	008	044	1980	22.2	25.4	1.40	25.4	22.64
N434	008	044	1980	14.6	15.4	12.18	25.4	22.64
N434	008	044	1980	9.7	10.5	16.32	25.4	22.64
N434	008	044	1980	4.5	5.1	20.35	25.4	22.64
N434	008	023	1980	24.0	27.8	0.00	23.2	19.90
N434	008	023	1980	20.3	23.2	1.40	23.2	19.90
N434	008	023	1980	19.1	20.7	3.38	23.2	19.90
N434	008	023	1980	17.3	18.5	6.44	23.2	19.90
N434	008	023	1980	12.1	12.9	12.49	23.2	19.90
N434	008	023	1980	10.0	10.6	14.17	23.2	19.90
N434	008	023	1980	7.6	8.2	15.48	23.2	19.90
N434	008	023	1980	4.6	5.0	17.65	23.2	19.90
N434	008	016	1980	24.9	29.9	0.00	26.3	20.83
N434	008	016	1980	23.7	28.1	0.70	26.3	20.83
N434	008	016	1980	22.6	26.3	1.40	26.3	20.83
N434	008	016	1980	20.2	21.7	4.38	26.3	20.83
N434	008	016	1980	15.5	16.5	10.08	26.3	20.83
N434	008	016	1980	6.1	6.9	17.73	26.3	20.83
N434	008	004	1980	21.1	24.5	0.70	21.5	16.93
N434	008	004	1980	19.0	21.5	1.40	21.5	16.93
N434	008	004	1980	17.9	19.0	4.10	21.5	16.93
N434	008	004	1980	13.1	14.0	8.83	21.5	16.93
N434	008	004	1980	10.7	11.5	11.00	21.5	16.93
N434	008	004	1980	8.2	9.0	13.03	21.5	16.93
N434	008	004	1980	5.5	6.3	14.80	21.5	16.93
N434	008	040	1980	20.4	24.0	0.00	21.0	18.30
N434	008	040	1980	19.5	22.5	0.70	21.0	18.30
N434	008	040	1980	18.5	21.0	1.40	21.0	18.30
N434	008	040	1980	17.5	18.5	3.64	21.0	18.30
N434	008	040	1980	12.7	13.5	9.20	21.0	18.30
N434	008	040	1980	8.4	9.2	13.26	21.0	18.30
N434	008	040	1980	6.0	6.8	14.57	21.0	18.30
N434	009	024	1980	24.7	27.8	0.00	25.8	21.01
N434	009	024	1980	24.1	26.8	0.70	25.8	21.01
N434	009	024	1980	23.6	25.8	1.40	25.8	21.01
N434	009	024	1980	19.6	21.0	7.20	25.8	21.01
N434	009	024	1980	10.3	10.9	15.45	25.8	21.01
N434	009	024	1980	4.9	5.5	18.65	25.8	21.01
N434	009	036	1980	20.4	24.8	0.00	20.0	20.00
N434	009	036	1980	19.4	22.4	0.70	20.0	20.00
N434	009	036	1980	18.4	20.0	1.40	20.0	20.00
N434	009	036	1980	16.4	17.6	2.72	20.0	20.00
N434	009	036	1980	9.4	10.0	13.90	20.0	20.00
N434	009	036	1980	6.7	7.3	16.05	20.0	20.00
N434	009	036	1980	4.2	4.8	18.20	20.0	20.00
N434	009	013	1980	23.8	29.2	0.00	23.4	18.25

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	009	013	1980	22.0	26.3	0.70	23.4	18.25
N434	009	013	1980	16.9	18.3	5.30	23.4	18.25
N434	009	013	1980	14.9	15.9	7.69	23.4	18.25
N434	009	013	1980	12.4	13.4	10.25	23.4	18.25
N434	009	013	1980	10.2	10.8	12.45	23.4	18.25
N434	009	013	1980	7.9	8.5	14.00	23.4	18.25
N434	009	013	1980	5.0	5.6	15.60	23.4	18.25
N434	009	001	1980	23.8	29.1	0.00	25.9	20.00
N434	009	001	1980	23.4	27.5	0.70	25.9	20.00
N434	009	001	1980	23.0	25.9	1.40	25.9	20.00
N434	009	001	1980	19.5	20.9	5.33	25.9	20.00
N434	009	001	1980	14.9	15.9	11.13	25.9	20.00
N434	009	001	1980	10.5	11.1	14.92	25.9	20.00
N434	009	019	1980	20.5	23.7	0.00	19.9	19.53
N434	009	019	1980	19.4	21.8	0.70	19.9	19.53
N434	009	019	1980	18.3	19.9	1.40	19.9	19.53
N434	009	019	1980	14.3	14.9	8.70	19.9	19.53
N434	009	019	1980	11.6	12.2	11.55	19.9	19.53
N434	009	019	1980	7.0	7.6	15.69	19.9	19.53
N434	010	017	1980	23.9	28.2	0.00	25.4	18.46
N434	010	017	1980	22.7	25.4	1.40	25.4	18.46
N434	010	017	1980	18.8	20.0	4.80	25.4	18.46
N434	010	017	1980	13.8	15.0	9.90	25.4	18.46
N434	010	017	1980	8.9	10.1	13.47	25.4	18.46
N434	010	017	1980	4.4	5.0	16.45	25.4	18.46
N434	010	004	1980	23.4	27.2	0.00	23.6	23.20
N434	010	004	1980	22.4	25.4	0.70	23.6	23.20
N434	010	004	1980	19.7	21.5	2.52	23.6	23.20
N434	010	004	1980	14.7	15.9	9.13	23.6	23.20
N434	010	004	1980	12.4	13.4	11.35	23.6	23.20
N434	010	004	1980	10.2	11.2	13.44	23.6	23.20
N434	010	004	1980	7.8	8.8	15.23	23.6	23.20
N434	010	004	1980	5.1	5.9	17.80	23.6	23.20
N434	010	023	1980	18.3	22.8	0.00	19.6	18.20
N434	010	023	1980	17.7	21.2	0.70	19.6	18.20
N434	010	023	1980	17.1	19.6	1.40	19.6	18.20
N434	010	023	1980	15.8	17.0	3.20	19.6	18.20
N434	010	023	1980	8.6	9.8	12.16	19.6	18.20
N434	010	023	1980	6.2	6.8	14.33	19.6	18.20
N434	010	025	1980	20.7	24.1	0.00	19.5	19.24
N434	010	025	1980	17.1	19.5	1.40	19.5	19.24
N434	010	025	1980	15.8	17.4	3.50	19.5	19.24
N434	010	025	1980	13.1	14.3	7.77	19.5	19.24
N434	010	025	1980	8.0	9.2	13.88	19.5	19.24
N434	010	025	1980	6.4	7.2	15.40	19.5	19.24
N434	010	038	1980	21.0	24.3	0.00	21.5	19.43
N434	010	038	1980	19.6	21.5	1.40	21.5	19.43
N434	010	038	1980	17.6	18.8	3.07	21.5	19.43
N434	010	038	1980	15.9	16.7	5.58	21.5	19.43
N434	010	038	1980	10.7	11.5	11.30	21.5	19.43
N434	010	038	1980	8.1	8.9	13.85	21.5	19.43
N434	010	038	1980	5.5	6.3	15.94	21.5	19.43

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	011	035	1980	22.4	25.6	0.00	22.6	19.45
N434	011	035	1980	21.3	24.1	0.70	22.6	19.45
N434	011	035	1980	20.1	22.6	1.40	22.6	19.45
N434	011	035	1980	19.0	20.2	3.33	22.6	19.45
N434	011	035	1980	16.6	17.6	7.65	22.6	19.45
N434	011	035	1980	12.0	12.6	11:43	22.6	19.45
N434	011	035	1980	9.6	10.2	13.56	22.6	19.45
N434	011	035	1980	4.5	5.1	18.10	22.6	19.45
N434	011	015	1980	28.4	32.7	0.00	27.5	22.14
N434	011	015	1980	26.3	30.1	0.70	27.5	22.14
N434	011	015	1980	24.2	27.5	1.40	27.5	22.14
N434	011	015	1980	20.6	22.0	5.00	27.5	22.14
N434	011	015	1980	16.6	17.6	10.80	27.5	22.14
N434	011	015	1980	7.4	8.0	17.92	27.5	22.14
N434	011	006	1980	20.0	23.8	0.00	19.4	16.37
N434	011	006	1980	14.9	16.7	3.00	19.4	16.37
N434	011	006	1980	13.7	14.5	6.24	19.4	16.37
N434	011	006	1980	11.1	11.9	9.10	19.4	16.37
N434	011	006	1980	8.8	9.4	11.43	19.4	16.37
N434	011	006	1980	6.5	7.1	13.33	19.4	16.37
N434	011	013	1980	22.9	27.5	0.00	26.7	22.10
N434	011	013	1980	23.3	27.1	0.70	26.7	22.10
N434	011	013	1980	23.7	26.7	1.40	26.7	22.10
N434	011	013	1980	20.6	22.0	6.03	26.7	22.10
N434	011	013	1980	10.8	11.8	15.14	26.7	22.10
N434	011	013	1980	6.2	7.0	19.10	26.7	22.10
N434	011	026	1980	17.6	21.4	0.00	18.8	19.09
N434	011	026	1980	16.7	20.1	0.70	18.8	19.09
N434	011	026	1980	15.8	18.8	1.40	18.8	19.09
N434	011	026	1980	15.1	16.5	2.40	18.8	19.09
N434	011	026	1980	12.5	13.7	7.28	18.8	19.09
N434	011	026	1980	7.7	8.5	13.62	18.8	19.09
N434	013	043	1980	26.7	31.6	0.00	26.0	19.18
N434	013	043	1980	23.3	26.0	1.40	26.0	19.18
N434	013	043	1980	19.8	21.2	5.20	26.0	19.18
N434	013	043	1980	15.0	16.2	9.80	26.0	19.18
N434	013	043	1980	10.4	11.0	13.20	26.0	19.18
N434	013	043	1980	5.6	6.0	16.80	26.0	19.18
N434	013	033	1980	19.6	22.8	0.70	20.6	19.31
N434	013	033	1980	18.2	20.6	1.40	20.6	19.31
N434	013	033	1980	16.8	18.2	3.71	20.6	19.31
N434	013	033	1980	12.5	13.3	10.95	20.6	19.31
N434	013	033	1980	10.7	11.5	12.80	20.6	19.31
N434	013	033	1980	7.3	7.9	15.22	20.6	19.31
N434	013	033	1980	6.3	6.9	15.91	20.6	19.31
N434	013	007	1980	20.0	25.2	0.00	20.8	17.54
N434	013	007	1980	19.0	23.0	0.70	20.8	17.54
N434	013	007	1980	18.0	20.8	1.40	20.8	17.54
N434	013	007	1980	16.4	17.8	3.05	20.8	17.54
N434	013	007	1980	12.5	13.5	8.87	20.8	17.54
N434	013	007	1980	10.1	10.7	10.83	20.8	17.54
N434	013	007	1980	8.0	8.6	12.70	20.8	17.54

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	013	008	1980	26.8	31.8	0.00	25.4	19.94
N434	013	008	1980	24.6	28.6	0.70	25.4	19.94
N434	013	008	1980	22.4	25.4	1.40	25.4	19.94
N434	013	008	1980	18.4	20.2	4.35	25.4	19.94
N434	013	008	1980	14.2	15.4	9.71	25.4	19.94
N434	013	008	1980	5.0	5.4	17.19	25.4	19.94
N434	013	003	1980	20.7	24.7	0.70	22.3	19.31
N434	013	003	1980	18.1	19.7	2.92	22.3	19.31
N434	013	003	1980	16.2	17.2	6.26	22.3	19.31
N434	013	003	1980	14.3	14.9	9.19	22.3	19.31
N434	013	003	1980	11.6	12.2	11.28	22.3	19.31
N434	013	003	1980	9.3	9.7	13.30	22.3	19.31
N434	013	003	1980	7.1	7.5	15.52	22.3	19.31
N434	014	018	1980	20.3	23.1	1.40	23.1	19.40
N434	014	018	1980	18.8	20.6	3.29	23.1	19.40
N434	014	018	1980	16.4	18.0	6.84	23.1	19.40
N434	014	018	1980	13.8	15.4	9.12	23.1	19.40
N434	014	018	1980	12.3	13.3	11.19	23.1	19.40
N434	014	018	1980	9.6	10.6	13.50	23.1	19.40
N434	014	018	1980	7.0	8.0	15.40	23.1	19.40
N434	014	018	1980	4.8	5.6	17.10	23.1	19.40
N434	014	011	1980	26.7	31.6	0.00	27.0	19.95
N434	014	011	1980	25.2	29.3	0.70	27.0	19.95
N434	014	011	1980	23.7	27.0	1.40	27.0	19.95
N434	014	011	1980	20.5	22.1	5.10	27.0	19.95
N434	014	011	1980	16.1	17.5	10.03	27.0	19.95
N434	014	011	1980	10.6	11.6	13.40	27.0	19.95
N434	014	003	1980	28.5	34.4	0.00	27.6	21.05
N434	014	003	1980	26.3	31.0	0.70	27.6	21.05
N434	014	003	1980	24.1	27.6	1.40	27.6	21.05
N434	014	003	1980	21.3	22.7	4.37	27.6	21.05
N434	014	003	1980	16.3	17.5	10.56	27.6	21.05
N434	014	003	1980	11.7	12.7	13.94	27.6	21.05
N434	014	023	1980	19.5	22.0	1.40	22.0	17.40
N434	014	023	1980	17.9	19.3	3.13	22.0	17.40
N434	014	023	1980	16.0	17.0	5.70	22.0	17.40
N434	014	023	1980	13.1	14.1	8.75	22.0	17.40
N434	014	023	1980	11.0	12.0	10.93	22.0	17.40
N434	014	023	1980	8.7	9.7	12.30	22.0	17.40
N434	014	023	1980	6.1	7.1	13.70	22.0	17.40
N434	014	012	1980	22.5	25.8	0.00	21.8	18.74
N434	014	012	1980	18.5	21.8	1.40	21.8	18.74
N434	014	012	1980	18.2	19.8	2.23	21.8	18.74
N434	014	012	1980	15.8	16.8	4.58	21.8	18.74
N434	014	012	1980	13.1	14.1	6.83	21.8	18.74
N434	014	012	1980	11.0	11.8	11.42	21.8	18.74
N434	014	012	1980	8.2	9.0	13.60	21.8	18.74
N434	015	044	1980	25.0	29.6	0.00	24.6	20.50
N434	015	044	1980	23.3	27.1	0.70	24.6	20.50
N434	015	044	1980	21.6	24.6	1.40	24.6	20.50
N434	015	044	1980	18.4	19.8	6.69	24.6	20.50
N434	015	044	1980	15.9	17.3	9.31	24.6	20.50

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (80% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	015	044	1980	13.8	14.8	11.45	24.6	20.50
N434	015	044	1980	10.5	11.1	14.30	24.6	20.50
N434	015	044	1980	9.0	9.6	15.35	24.6	20.50
N434	015	044	1980	4.6	5.0	18.70	24.6	20.50
N434	015	006	1980	21.4	25.3	0.00	22.9	18.40
N434	015	006	1980	20.6	24.1	0.70	22.9	18.40
N434	015	006	1980	19.9	22.9	1.40	22.9	18.40
N434	015	006	1980	16.4	17.8	4.05	22.9	18.40
N434	015	006	1980	14.5	15.5	7.70	22.9	18.40
N434	015	006	1980	12.1	12.9	10.50	22.9	18.40
N434	015	006	1980	9.2	10.0	12.85	22.9	18.40
N434	015	006	1980	4.8	5.4	15.97	22.9	18.40
N434	015	013	1980	23.6	28.1	0.00	25.5	20.81
N434	015	013	1980	23.0	26.8	0.70	25.5	20.81
N434	015	013	1980	22.4	25.5	1.40	25.5	20.81
N434	015	013	1980	19.0	20.6	5.19	25.5	20.81
N434	015	013	1980	14.1	15.5	10.95	25.5	20.81
N434	015	013	1980	9.8	10.6	15.04	25.5	20.81
N434	015	021	1980	17.1	22.0	0.00	20.2	18.05
N434	015	021	1980	18.3	20.2	1.40	20.2	18.05
N434	015	021	1980	16.5	17.7	3.29	20.2	18.05
N434	015	021	1980	14.0	15.0	6.89	20.2	18.05
N434	015	021	1980	11.9	12.7	9.91	20.2	18.05
N434	015	021	1980	9.5	10.1	11.50	20.2	18.05
N434	015	021	1980	6.9	7.5	14.58	20.2	18.05
N434	015	042	1980	18.7	21.7	0.70	20.2	18.72
N434	015	042	1980	16.3	17.7	3.12	20.2	18.72
N434	015	042	1980	14.1	14.9	7.84	20.2	18.72
N434	015	042	1980	11.7	12.5	10.76	20.2	18.72
N434	015	042	1980	9.9	10.5	12.53	20.2	18.72
N434	015	042	1980	6.9	7.5	14.74	20.2	18.72
N434	015	042	1980	4.2	4.8	16.83	20.2	18.72

Appendix 27. Sectionol measurement doto for Robbit Island. (20% sub-somple)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	001	001	1976	15.3	16.0	3.96	18.8	15.50
N434	001	001	1976	13.6	14.2	5.89	18.8	15.50
N434	001	001	1976	5.8	6.2	12.14	18.8	15.50
N434	001	002	1976	13.1	14.7	0.70	13.5	14.65
N434	001	002	1976	6.7	7.1	9.68	13.5	14.65
N434	001	003	1976	17.4	20.2	0.00	16.0	15.53
N434	001	003	1976	4.8	5.0	12.85	16.0	15.53
N434	001	004	1976	13.1	14.5	0.70	13.0	14.00
N434	001	004	1976	5.0	5.4	11.32	13.0	14.00
N434	001	005	1976	9.6	10.2	5.60	13.5	12.25
N434	001	005	1976	8.7	9.3	6.72	13.5	12.25
N434	001	006	1976	17.8	19.6	1.40	19.6	14.35
N434	001	006	1976	9.5	10.1	9.05	19.6	14.35
N434	001	006	1976	3.8	4.0	12.53	19.6	14.35
N434	001	007	1976	16.9	18.3	0.00	16.1	14.50
N434	001	007	1976	15.1	16.1	1.40	16.1	14.50
N434	001	007	1976	12.6	13.2	4.95	16.1	14.50
N434	001	008	1976	17.8	20.0	0.00	19.4	15.55
N434	001	008	1976	10.1	10.7	9.15	19.4	15.55
N434	001	008	1976	5.7	6.1	12.56	19.4	15.55
N434	001	009	1976	17.7	19.1	1.40	19.1	15.23
N434	001	009	1976	12.0	12.6	6.12	19.1	15.23
N434	001	009	1976	4.5	4.7	13.05	19.1	15.23
N434	001	010	1976	7.0	7.4	11.22	19.0	14.90
N434	001	010	1976	6.0	6.4	11.72	19.0	14.90
N434	001	010	1976	4.8	5.0	12.58	19.0	14.90
N434	001	011	1976	14.9	16.5	0.00	13.5	13.28
N434	001	011	1976	8.1	8.6	7.95	13.5	13.28
N434	001	012	1976	19.9	22.7	0.00	19.7	12.05
N434	001	012	1976	19.2	21.2	0.70	19.7	12.05
N434	002	001	1976	11.2	11.8	7.37	18.8	15.96
N434	002	001	1976	5.3	5.7	12.55	18.8	15.96
N434	002	001	1976	4.0	4.2	13.85	18.8	15.96
N434	002	002	1976	7.9	8.3	7.65	12.8	12.84
N434	002	002	1976	5.9	6.3	9.77	12.8	12.84
N434	002	003	1976	14.3	15.9	0.00	13.5	14.05
N434	002	003	1976	10.9	11.5	4.40	13.5	14.05
N434	002	004	1976	13.1	14.9	0.00	13.1	15.06
N434	002	004	1976	9.6	10.0	5.69	13.1	15.06
N434	002	005	1976	8.7	9.3	8.89	16.4	13.75
N434	002	005	1976	4.8	5.0	11.63	16.4	13.75
N434	002	006	1976	9.7	10.1	3.60	13.0	12.10
N434	002	006	1976	7.2	7.6	7.38	13.0	12.10
N434	002	007	1976	16.7	18.1	1.40	18.1	14.12
N434	002	007	1976	14.8	15.7	2.50	18.1	14.12
N434	002	007	1976	5.9	6.3	10.88	18.1	14.12
N434	002	008	1976	17.8	20.0	0.70	18.1	14.20
N434	002	008	1976	11.3	11.9	6.40	18.1	14.20
N434	002	008	1976	10.2	10.9	7.31	18.1	14.20
N434	002	009	1976	16.0	16.6	3.35	18.9	15.33
N434	002	009	1976	11.2	11.8	8.90	18.9	15.33
N434	002	009	1976	10.2	10.8	9.50	18.9	15.33

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	002	010	1976	19.1	21.1	0.70	19.2	15.25
N434	002	010	1976	16.3	17.3	3.15	19.2	15.25
N434	002	010	1976	7.9	8.5	10.80	19.2	15.25
N434	002	011	1976	14.9	15.6	5.02	19.9	16.40
N434	002	011	1976	12.6	13.3	7.66	19.9	16.40
N434	002	011	1976	11.5	12.1	8.36	19.9	16.40
N434	002	012	1976	9.6	10.2	6.94	16.4	12.68
N434	002	012	1976	7.6	8.2	8.58	16.4	12.68
N434	003	001	1976	13.1	13.9	3.50	16.3	14.25
N434	003	001	1976	12.2	12.8	4.80	16.3	14.25
N434	003	002	1976	19.0	21.8	0.00	19.2	15.52
N434	003	002	1976	12.1	12.7	7.34	19.2	15.52
N434	003	002	1976	9.9	10.5	9.25	19.2	15.52
N434	003	003	1976	12.9	13.5	6.06	19.4	15.45
N434	003	003	1976	8.9	9.4	9.95	19.4	15.45
N434	003	003	1976	5.9	6.3	12.10	19.4	15.45
N434	003	004	1976	6.1	6.5	10.85	15.6	14.55
N434	003	004	1976	5.0	5.2	12.18	15.6	14.55
N434	003	005	1976	13.6	14.3	4.60	18.6	14.00
N434	003	005	1976	7.4	7.8	9.80	18.6	14.00
N434	003	005	1976	5.4	5.8	10.85	18.6	14.00
N434	003	006	1976	8.1	8.7	10.35	19.5	14.50
N434	003	006	1976	6.4	6.8	11.20	19.5	14.50
N434	003	007	1976	7.9	8.3	7.20	12.3	11.95
N434	003	007	1976	5.0	5.2	9.90	12.3	11.95
N434	003	008	1976	15.9	17.0	3.20	19.5	15.43
N434	003	008	1976	12.8	13.4	6.00	19.5	15.43
N434	003	008	1976	5.2	5.6	12.42	19.5	15.43
N434	003	009	1976	13.2	14.4	0.70	13.1	13.28
N434	003	009	1976	6.6	7.0	9.30	13.1	13.28
N434	003	010	1976	9.2	9.6	5.90	13.0	13.62
N434	003	010	1976	6.1	6.5	9.85	13.0	13.62
N434	003	011	1976	12.3	13.0	1.40	13.0	13.55
N434	003	011	1976	6.5	6.9	9.70	13.0	13.55
N434	003	012	1976	18.5	19.7	1.40	19.7	15.55
N434	003	012	1976	7.3	7.9	11.50	19.7	15.55
N434	003	012	1976	4.4	4.8	13.62	19.7	15.55
N434	001	001	1980	22.0	25.0	0.00	22.2	19.00
N434	001	001	1980	21.2	23.6	0.70	22.2	19.00
N434	001	013	1980	28.2	31.6	0.00	27.4	25.30
N434	001	023	1980	16.6	18.0	9.50	27.8	19.90
N434	001	012	1980	18.7	20.3	6.08	25.0	20.38
N434	001	035	1980	16.7	18.1	3.28	20.5	17.43
N434	001	035	1980	9.5	10.5	11.80	20.5	17.43
N434	003	016	1980	25.2	28.5	1.40	28.5	20.71
N434	003	044	1980	17.1	19.1	2.95	21.7	18.23
N434	003	044	1980	13.1	14.1	8.17	21.7	18.23
N434	003	029	1980	21.0	23.7	1.40	23.7	19.88
N434	003	029	1980	5.5	6.1	16.94	23.7	19.88
N434	003	032	1980	25.3	29.7	0.70	27.7	20.18
N434	003	025	1980	17.0	19.0	3.01	21.5	18.15
N434	003	025	1980	12.4	13.8	9.26	21.5	18.15

Appendix 27. Sectional measurement data for Rabbit Island.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	004	040	1980	18.6	22.6	0.00	19.6	17.70
N434	004	040	1980	13.5	14.7	6.72	19.6	17.70
N434	004	030	1980	25.8	30.0	0.00	25.6	22.20
N434	004	027	1980	9.9	11.3	14.90	26.1	19.80
N434	004	026	1980	21.9	26.0	0.70	23.3	20.30
N434	004	026	1980	16.8	18.2	6.83	23.3	20.30
N434	004	037	1980	16.0	19.8	0.70	19.4	17.80
N434	004	037	1980	15.6	17.2	2.03	19.4	17.80
N434	005	020	1980	10.5	11.3	13.27	23.8	21.21
N434	005	020	1980	5.6	6.2	18.00	23.8	21.21
N434	005	012	1980	10.2	10.8	13.45	26.0	19.60
N434	005	032	1980	14.8	16.0	7.34	26.2	21.02
N434	005	029	1980	12.6	13.6	9.98	21.0	19.05
N434	005	029	1980	5.4	6.0	16.28	21.0	19.05
N434	005	040	1980	19.5	21.5	1.40	21.5	19.68
N434	005	040	1980	17.2	18.8	2.54	21.5	19.68
N434	006	038	1980	21.6	26.3	0.00	20.5	20.30
N434	006	038	1980	14.6	15.6	7.80	20.5	20.30
N434	006	010	1980	17.8	19.4	2.46	22.0	19.80
N434	006	010	1980	8.3	9.5	14.90	22.0	19.80
N434	006	005	1980	15.0	16.0	4.90	20.8	18.40
N434	006	005	1980	7.0	8.0	14.20	20.8	18.40
N434	006	022	1980	18.4	19.8	4.60	24.3	19.95
N434	006	022	1980	14.0	15.0	10.68	24.3	19.95
N434	006	042	1980	23.0	27.7	0.00	24.5	20.70
N434	006	042	1980	21.8	24.5	1.40	24.5	20.70
N434	008	044	1980	19.0	20.2	4.98	25.4	22.64
N434	008	023	1980	22.2	25.5	0.70	23.2	19.90
N434	008	023	1980	14.5	15.5	10.27	23.2	19.90
N434	008	016	1980	10.5	11.3	14.45	26.3	20.83
N434	008	004	1980	23.1	27.5	0.00	21.5	16.93
N434	008	004	1980	15.5	16.5	6.43	21.5	16.93
N434	008	040	1980	15.0	16.0	6.85	21.0	18.30
N434	008	040	1980	10.4	11.2	11.50	21.0	18.30
N434	009	024	1980	15.0	16.0	11.57	25.8	21.01
N434	009	036	1980	14.1	14.9	7.54	20.0	20.00
N434	009	036	1980	12.0	12.6	10.73	20.0	20.00
N434	009	013	1980	20.2	23.4	1.40	23.4	18.25
N434	009	013	1980	19.0	21.0	2.73	23.4	18.25
N434	009	001	1980	5.3	5.9	18.16	25.9	20.00
N434	009	019	1980	16.5	17.5	4.11	19.9	19.53
N434	009	019	1980	9.3	9.9	13.78	19.9	19.53
N434	010	017	1980	23.3	26.8	0.70	25.4	18.46
N434	010	004	1980	21.4	23.6	1.40	23.6	23.20
N434	010	004	1980	16.8	18.2	6.38	23.6	23.20
N434	010	023	1980	13.2	14.4	6.08	19.6	18.20
N434	010	023	1980	11.1	12.3	9.00	19.6	18.20
N434	010	025	1980	18.9	21.8	0.70	19.5	19.24
N434	010	025	1980	10.6	11.8	11.17	19.5	19.24
N434	010	038	1980	20.3	22.9	0.70	21.5	19.43
N434	010	038	1980	13.5	14.3	8.53	21.5	19.43
N434	011	035	1980	14.4	15.2	9.60	22.6	19.45

Appendix 27. Sectional measurement data for Robbit Island.
(cont.) (20% sub-sample)

REF.	PLT	TREE	YEAR	Dub	Dob	HGT. MEAS.	DBHob	TREE HGT.
N434	011	035	1980	7.1	7.7	16.00	22.6	19.45
N434	011	015	1980	11.5	12.5	14.21	27.5	22.14
N434	011	006	1980	18.2	21.6	0.70	19.4	16.37
N434	011	006	1980	16.4	19.4	1.40	19.4	16.37
N434	011	013	1980	14.9	16.3	12.46	26.7	22.10
N434	011	026	1980	10.3	11.5	11.26	18.8	19.09
N434	011	026	1980	5.8	6.2	16.13	18.8	19.09
N434	013	043	1980	25.0	28.8	0.70	26.0	19.18
N434	013	033	1980	21.0	25.0	0.00	20.6	19.31
N434	013	033	1980	14.6	15.8	7.10	20.6	19.31
N434	013	007	1980	14.8	15.8	6.20	20.8	17.54
N434	013	007	1980	4.8	5.2	15.10	20.8	17.54
N434	013	008	1980	9.9	10.5	13.66	25.4	19.94
N434	013	003	1980	22.3	27.1	0.00	22.3	19.31
N434	013	003	1980	19.1	22.3	1.40	22.3	19.31
N434	014	018	1980	23.0	26.9	0.00	23.1	19.40
N434	014	018	1980	21.7	25.0	0.70	23.1	19.40
N434	014	011	1980	6.5	7.1	16.60	27.0	19.95
N434	014	003	1980	6.8	7.6	17.46	27.6	21.05
N434	014	023	1980	25.3	30.0	0.00	22.0	17.40
N434	014	023	1980	22.4	26.0	0.70	22.0	17.40
N434	014	012	1980	20.5	23.8	0.70	21.8	18.74
N434	014	012	1980	6.2	7.0	15.36	21.8	18.74
N434	015	044	1980	20.9	22.5	3.31	24.6	20.50
N434	015	044	1980	6.4	7.0	17.26	24.6	20.50
N434	015	006	1980	18.9	20.5	1.90	22.9	18.40
N434	015	006	1980	7.1	7.7	14.40	22.9	18.40
N434	015	013	1980	4.8	5.4	18.20	25.5	20.81
N434	015	021	1980	17.7	21.1	0.70	20.2	18.05
N434	015	021	1980	4.7	5.3	16.32	20.2	18.05
N434	015	042	1980	19.7	23.2	0.00	20.2	18.72
N434	015	042	1980	17.7	20.2	1.40	20.2	18.72

Appendix 28. Summary of sectionally measured trees for Rabbit Island.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N434	001	001	1976	18.8	15.50	0.1754159	0.1997781
N434	001	002	1976	13.5	14.65	0.0911828	0.1046727
N434	001	003	1976	16.0	15.53	0.1306628	0.1499536
N434	001	004	1976	13.0	14.00	0.0919194	0.1051831
N434	001	005	1976	13.5	12.25	0.0797463	0.0924353
N434	001	006	1976	19.6	14.35	0.1686755	0.1969513
N434	001	007	1976	16.1	14.50	0.1357004	0.1517342
N434	001	008	1976	19.4	15.55	0.1793299	0.2030062
N434	001	009	1976	19.1	15.23	0.1579853	0.1809079
N434	001	010	1976	19.0	14.90	0.1683990	0.1914909
N434	001	011	1976	13.5	13.28	0.0894853	0.1014555
N434	001	012	1976	19.7	12.05	0.1396230	0.1599328
N434	002	001	1976	18.8	15.96	0.1681598	0.1921177
N434	002	002	1976	12.8	12.84	0.0743109	0.0844442
N434	002	003	1976	13.5	14.05	0.0928232	0.1045011
N434	002	004	1976	13.1	15.06	0.0824579	0.0920813
N434	002	005	1976	16.4	13.75	0.1338140	0.1556947
N434	002	006	1976	13.0	12.10	0.0683118	0.0769889
N434	002	007	1976	18.1	14.12	0.1457936	0.1679903
N434	002	008	1976	18.1	14.20	0.1433697	0.1666290
N434	002	009	1976	18.9	15.33	0.1881663	0.2121224
N434	002	010	1976	19.2	15.25	0.1898233	0.2183592
N434	002	011	1976	19.9	16.40	0.1981901	0.2239037
N434	002	012	1976	16.4	12.68	0.1139609	0.1290847
N434	003	001	1976	16.3	14.25	0.1217519	0.1424202
N434	003	002	1976	19.2	15.52	0.1810156	0.2068682
N434	003	003	1976	19.4	15.45	0.1723649	0.1943539
N434	003	004	1976	15.6	14.55	0.1079423	0.1234384
N434	003	005	1976	18.6	14.00	0.1510129	0.1741834
N434	003	006	1976	19.5	14.50	0.1869602	0.2104519
N434	003	007	1976	12.3	11.95	0.0697033	0.0768448
N434	003	008	1976	19.5	15.43	0.1750917	0.2000118
N434	003	009	1976	13.1	13.28	0.0847697	0.0955404
N434	003	010	1976	13.0	13.62	0.0777629	0.0902660
N434	003	011	1976	13.0	13.55	0.0841888	0.0941798
N434	003	012	1976	19.7	15.55	0.1877837	0.2112094
N434	001	001	1980	22.2	19.00	0.2879760	0.3404146
N434	001	013	1980	27.4	25.30	0.5015681	0.5942286
N434	001	023	1980	27.8	19.90	0.4077026	0.4971574
N434	001	012	1980	25.0	20.38	0.3764455	0.4610578
N434	001	035	1980	20.5	17.43	0.2322328	0.2800837
N434	003	016	1980	28.5	20.71	0.4644219	0.5495430
N434	003	044	1980	21.7	18.23	0.2410599	0.2991185
N434	003	029	1980	23.7	19.88	0.3239170	0.3875287
N434	003	032	1980	27.7	20.18	0.4112039	0.5059369
N434	003	025	1980	21.5	18.15	0.2354598	0.3019804
N434	004	040	1980	19.6	17.70	0.1988883	0.2554289
N434	004	030	1980	25.6	22.20	0.4169950	0.5188822
N434	004	027	1980	26.1	19.80	0.4178736	0.5077285
N434	004	026	1980	23.3	20.30	0.3364171	0.4159796
N434	004	037	1980	19.4	17.80	0.1625790	0.2035714
N434	005	020	1980	23.8	21.21	0.3207864	0.3891219
N434	005	012	1980	26.0	19.60	0.3319988	0.4075736

Appendix 28. Summary of sectionally measured trees for
(cont.) Rabbit Island.

REF.	PLT	TREE	YEAR	DBHob	HEIGHT	VOLUMEub	VOLUMEob
N434	005	032	1980	26.2	21.02	0.3467168	0.4186667
N434	005	029	1980	21.0	19.05	0.2647154	0.3131627
N434	005	040	1980	21.5	19.68	0.2550049	0.3039474
N434	006	038	1980	20.5	20.30	0.2782995	0.3329552
N434	006	010	1980	22.0	19.80	0.2647191	0.3299798
N434	006	005	1980	20.8	18.40	0.2153633	0.2645054
N434	006	022	1980	24.3	19.95	0.3357127	0.4070926
N434	006	042	1980	24.5	20.70	0.3558058	0.4250771
N434	008	044	1980	25.4	22.64	0.4122466	0.4896367
N434	008	023	1980	23.2	19.90	0.3335747	0.3979925
N434	008	016	1980	26.3	20.83	0.3927321	0.4791894
N434	008	004	1980	21.5	16.93	0.2570879	0.3101451
N434	008	040	1980	21.0	18.30	0.2460155	0.2930725
N434	009	024	1980	25.8	21.01	0.4465421	0.5226637
N434	009	036	1980	20.0	20.00	0.2494326	0.2917690
N434	009	013	1980	23.4	18.25	0.2828799	0.3494847
N434	009	001	1980	25.9	20.00	0.4017736	0.4835308
N434	009	019	1980	19.9	19.53	0.2633994	0.3017843
N434	010	017	1980	25.4	18.46	0.3307227	0.4006858
N434	010	004	1980	23.6	23.20	0.3239858	0.3909355
N434	010	023	1980	19.6	18.20	0.1918786	0.2407618
N434	010	025	1980	19.5	19.24	0.2207764	0.2756529
N434	010	038	1980	21.5	19.43	0.2565333	0.2995200
N434	011	035	1980	22.6	19.45	0.3170775	0.3689814
N434	011	015	1980	27.5	22.14	0.4622045	0.5525179
N434	011	006	1980	19.4	16.37	0.1844324	0.2288768
N434	011	013	1980	26.7	22.10	0.4599664	0.5574358
N434	011	026	1980	18.8	19.09	0.1901686	0.2387694
N434	013	043	1980	26.0	19.18	0.3819427	0.4586292
N434	013	033	1980	20.6	19.31	0.2604796	0.3146297
N434	013	007	1980	20.8	17.54	0.2186872	0.2689722
N434	013	008	1980	25.4	19.94	0.3391815	0.4183387
N434	013	003	1980	22.3	19.31	0.2811584	0.3367106
N434	014	018	1980	23.1	19.40	0.3022177	0.3745285
N434	014	011	1980	27.0	19.95	0.4126500	0.5064129
N434	014	003	1980	27.6	21.05	0.4507393	0.5471581
N434	014	023	1980	22.0	17.40	0.2566780	0.3122501
N434	014	012	1980	21.8	18.74	0.2377227	0.2873667
N434	015	044	1980	24.6	20.50	0.3824698	0.4597897
N434	015	006	1980	22.9	18.40	0.2569829	0.3096331
N434	015	013	1980	25.5	20.81	0.3721986	0.4599361
N434	015	021	1980	20.2	18.05	0.2216218	0.2658170
N434	015	042	1980	20.2	18.72	0.2362795	0.2823986

Appendix 29. Stand volume data for Rabbit Island.

REF.	PLT	YEAR	VOLub	VOLob	N	G	A	H
N434	001	1976	59.2	67.6	500.	9.7	8.0	13.8
N434	002	1976	57.7	65.9	500.	9.4	8.0	14.7
N434	003	1976	59.2	67.6	500.	9.7	8.0	13.9
N434	004	1976	59.7	68.1	500.	9.8	8.0	13.8
N434	005	1976	58.7	67.0	500.	9.6	8.0	14.9
N434	006	1976	58.1	66.2	500.	9.7	8.0	14.5
N434	007	1976	58.8	67.0	500.	9.8	8.0	14.7
N434	008	1976	58.1	66.2	500.	9.7	8.0	13.7
N434	009	1976	56.1	63.9	500.	9.4	8.0	15.5
N434	010	1976	54.9	62.4	500.	9.2	8.0	14.6
N434	011	1976	56.1	63.9	500.	9.4	8.0	15.2
N434	012	1976	56.1	63.8	500.	9.4	8.0	14.3
N434	013	1976	57.9	65.9	500.	9.7	8.0	14.4
N434	014	1976	58.5	66.5	500.	9.8	8.0	14.7
N434	015	1976	57.9	65.9	500.	9.7	8.0	14.5
N434	001	1980	207.5	249.9	500.	27.4	12.0	20.5
N434	003	1980	184.3	223.5	500.	26.3	12.0	20.5
N434	004	1980	150.8	187.2	500.	20.5	12.0	19.2
N434	005	1980	158.7	192.2	500.	23.8	12.0	20.9
N434	006	1980	153.5	186.0	500.	21.0	12.0	21.2
N434	008	1980	193.5	232.9	500.	25.3	12.0	21.7
N434	009	1980	181.1	215.5	500.	23.2	12.0	20.7
N434	010	1980	137.8	167.0	500.	19.9	12.0	21.2
N434	011	1980	185.7	223.3	500.	23.9	12.0	21.2
N434	013	1980	180.6	219.1	500.	25.9	12.0	21.0
N434	014	1980	189.2	231.1	500.	26.1	12.0	20.2
N434	015	1980	171.9	209.3	500.	23.4	12.0	20.8

Appendix 30. Data for diameter distributions in Rabbit Island.

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N434	001	1976	11.9	15.62	3.20	500.	9.7	8.0	34.12	300	0	0	8.0
N434	001	1977	14.5	18.87	4.63	500.	14.2	9.0	34.12	300	0	0	8.0
N434	001	1978	17.1	22.05	7.23	500.	19.4	10.0	34.12	300	0	0	8.0
N434	001	1979	19.3	24.45	9.18	500.	23.8	11.0	34.12	300	0	0	8.0
N434	001	1980	20.5	26.23	10.29	500.	27.4	12.0	34.12	300	0	0	8.0
N434	001	1981	26.5	31.65	8.01	244.	19.4	13.0	34.12	300	0	0	8.0
N434	003	1976	11.8	15.64	3.42	500.	9.7	8.0	34.24	200	0	0	8.0
N434	003	1977	14.0	18.73	4.26	500.	13.9	9.0	34.24	200	0	0	8.0
N434	003	1978	16.1	21.94	6.64	500.	19.2	10.0	34.24	200	0	0	8.0
N434	003	1979	17.6	24.06	8.41	500.	23.1	11.0	34.24	200	0	0	8.0
N434	003	1980	18.8	25.68	9.77	500.	26.3	12.0	34.24	200	0	0	8.0
N434	003	1981	25.5	30.44	6.42	256.	18.7	13.0	34.24	200	0	0	8.0
N434	004	1976	11.8	15.66	4.75	500.	9.8	8.0	32.93	0	0	0	8.0
N434	004	1977	13.1	17.52	5.66	500.	12.3	9.0	32.93	0	0	0	8.0
N434	004	1978	14.4	19.36	6.89	500.	15.0	10.0	32.93	0	0	0	8.0
N434	004	1979	15.2	21.06	8.10	500.	17.7	11.0	32.93	0	0	0	8.0
N434	004	1980	16.0	22.62	9.51	500.	20.5	12.0	32.93	0	0	0	8.0
N434	004	1981	22.3	27.00	6.30	244.	14.1	13.0	32.93	0	0	0	8.0
N434	005	1976	11.9	15.56	3.03	500.	9.6	8.0	35.58	100	0	0	8.0
N434	005	1977	13.7	18.19	3.56	500.	13.1	9.0	35.58	100	0	0	8.0
N434	005	1978	15.2	20.78	4.85	500.	17.1	10.0	35.58	100	0	0	8.0
N434	005	1979	16.9	22.78	5.70	500.	20.6	11.0	35.58	100	0	0	8.0
N434	005	1980	18.4	24.47	6.50	500.	23.8	12.0	35.58	100	0	0	8.0
N434	005	1981	23.5	28.90	6.54	256.	16.9	13.0	35.58	100	0	0	8.0
N434	006	1976	12.8	15.62	2.75	500.	9.7	8.0	34.10	0	0	0	8.0
N434	006	1977	14.2	17.54	2.82	500.	12.2	9.0	34.10	0	0	0	8.0
N434	006	1978	15.1	19.53	3.50	500.	15.1	10.0	34.10	0	0	0	8.0
N434	006	1979	15.9	21.34	4.02	500.	18.0	11.0	34.10	0	0	0	8.0
N434	006	1980	16.1	23.00	4.86	500.	21.0	12.0	34.10	0	0	0	8.0
N434	006	1981	23.2	26.48	4.22	256.	14.2	13.0	34.10	0	0	0	8.0
N434	008	1976	12.2	15.66	2.81	500.	9.7	8.0	34.08	300	0	0	8.0
N434	008	1977	14.8	18.85	4.56	500.	14.1	9.0	34.08	300	0	0	8.0
N434	008	1978	16.9	21.40	6.00	500.	18.2	10.0	34.08	300	0	0	8.0
N434	008	1979	18.6	23.57	6.91	500.	22.1	11.0	34.08	300	0	0	8.0
N434	008	1980	20.0	25.21	7.49	500.	25.2	12.0	34.08	300	0	0	8.0
N434	008	1981	24.9	29.49	6.71	256.	17.6	13.0	34.08	300	0	0	8.0
N434	009	1976	12.7	15.39	3.62	500.	9.4	8.0	36.34	100	0	0	8.0
N434	009	1977	14.0	18.00	5.58	500.	12.9	9.0	36.34	100	0	0	8.0
N434	009	1978	15.8	20.30	7.61	500.	16.5	10.0	36.34	100	0	0	8.0
N434	009	1979	16.7	22.28	9.35	500.	19.9	11.0	36.34	100	0	0	8.0
N434	009	1980	17.9	24.07	10.28	500.	23.2	12.0	36.34	100	0	0	8.0
N434	009	1981	24.5	28.96	6.95	244.	16.2	13.0	36.34	100	0	0	8.0
N434	010	1976	12.6	15.19	3.55	500.	9.2	8.0	34.23	0	0	0	8.0
N434	010	1977	13.3	17.49	4.95	500.	12.2	9.0	34.23	0	0	0	8.0
N434	010	1978	14.6	19.06	6.25	500.	14.5	10.0	34.23	0	0	0	8.0
N434	010	1979	16.1	20.78	7.64	500.	17.3	11.0	34.23	0	0	0	8.0
N434	010	1980	17.0	22.35	8.49	500.	19.9	12.0	34.23	0	0	0	8.0
N434	010	1981	22.8	26.38	7.19	244.	13.5	13.0	34.23	0	0	0	8.0
N434	011	1976	12.6	15.31	3.69	500.	9.3	8.0	36.01	200	0	0	8.0
N434	011	1977	14.3	18.08	5.00	500.	13.0	9.0	36.01	200	0	0	8.0
N434	011	1978	15.8	20.63	8.13	500.	17.0	10.0	36.01	200	0	0	8.0
N434	011	1979	17.1	22.72	10.00	500.	20.7	11.0	36.01	200	0	0	8.0
N434	011	1980	18.0	24.42	11.38	500.	23.8	12.0	36.01	200	0	0	8.0

Appendix 30. Data for diameter distributions in Rabbit Island.
(cont.)

REF.	PLT	YEAR	Dmin	Dmean	Dvar	N	G	A	SITE	Nf	Pf	Bf	Af
N434	011	1981	25.1	29.39	6.04	244.	16.7	13.0	36.01	200	0	0	8.0
N434	013	1976	12.9	15.62	3.73	500.	9.7	8.0	34.98	300	0	0	8.0
N434	013	1977	15.1	18.70	5.74	500.	13.9	9.0	34.98	300	0	0	8.0
N434	013	1978	16.5	21.58	8.42	500.	18.6	10.0	34.98	300	0	0	8.0
N434	013	1979	17.7	23.62	10.56	500.	22.3	11.0	34.98	300	0	0	8.0
N434	013	1980	18.9	25.45	12.34	500.	25.9	12.0	34.98	300	0	0	8.0
N434	013	1981	25.1	30.99	9.74	244.	18.6	13.0	34.98	300	0	0	8.0
N434	014	1976	12.6	15.70	3.17	500.	9.8	8.0	35.37	200	0	0	8.0
N434	014	1977	14.6	18.74	4.42	500.	14.0	9.0	35.37	200	0	0	8.0
N434	014	1978	16.5	21.62	6.30	500.	18.6	10.0	35.37	200	0	0	8.0
N434	014	1979	17.9	23.67	7.12	500.	22.3	11.0	35.37	200	0	0	8.0
N434	014	1980	19.0	25.61	8.12	500.	26.1	12.0	35.37	200	0	0	8.0
N434	014	1981	26.8	30.24	4.31	256.	18.4	13.0	35.37	200	0	0	8.0
N434	015	1976	12.6	15.59	4.58	500.	9.7	8.0	35.11	100	0	0	8.0
N434	015	1977	14.7	18.31	6.33	500.	13.4	9.0	35.11	100	0	0	8.0
N434	015	1978	16.8	20.69	8.40	500.	17.1	10.0	35.11	100	0	0	8.0
N434	015	1979	18.5	22.57	9.63	500.	20.4	11.0	35.11	100	0	0	8.0
N434	015	1980	19.2	24.19	10.41	500.	23.4	12.0	35.11	100	0	0	8.0
N434	015	1981	24.9	29.29	7.57	244.	16.6	13.0	35.11	100	0	0	8.0